

# Virginia Beach Department of Public Health 2019 Community Health Assessment



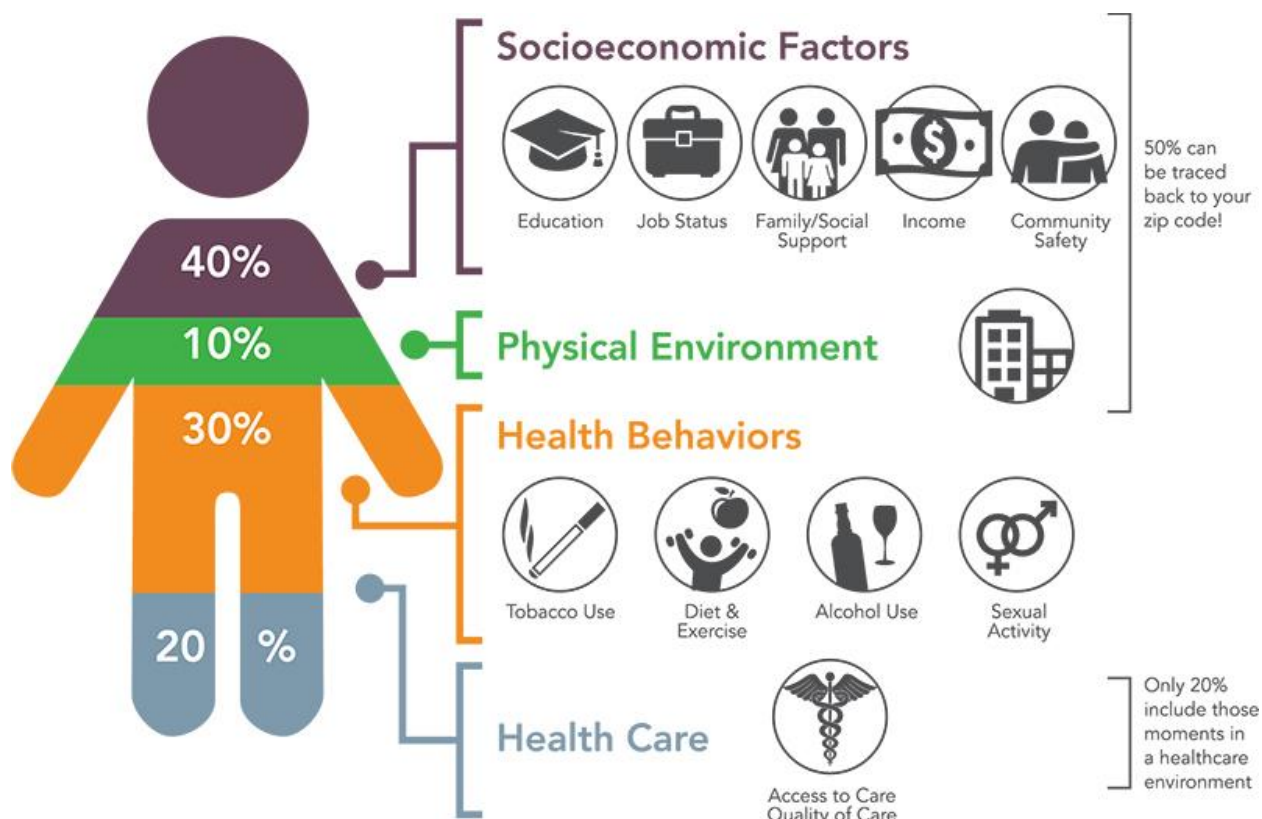
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## Introduction

Health is a complex result of where people live, learn, work, and play, as well as the lifestyles and behaviors adopted by a population. As such, evaluating the current state of health of a community requires looking far beyond only health care related data and outcomes. As the image above depicts, upwards of 40% of a person's health is influenced by socioeconomic factors, such as education, employment, family and social support, income, and community safety; another 10% of health is then impacted by the physical environment, including air and water quality and the built environment, which includes access to grocery stores, transportation, and safe clean places to recreate. Health behaviors or lifestyle influence up to 30% of one's health, including tobacco use, nutrition, exercise, alcohol use, and sexual activity. Health care, including health insurance coverage and access to services, make up the last 20% of the factors that influence health.



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

In developing the 2019 Virginia Beach Community Health Assessment (CHA), a collaborative approach was used, engaging a variety of stakeholders throughout the community to ensure that indicators were included to encompass the many and varying factors that influence the health of our community. The purpose of this report is to provide a meaningful and relevant picture of the health of Virginia Beach, as well as the current state of the many social determinants of health. This report can be used as a tool to guide the Virginia Beach Department of Public Health and its many partners in population health.

planning and developing of a strategy to prioritize and address the most important public health needs of Virginia Beach.

## County Health Rankings

Because of the complexities of health and the many influences and confluences that impact the health of a community, models that aggregate various health factors and health outcomes into a single score that can be used to compare health between communities are incredibly useful. One such model is County Health Ranking & Roadmaps, a collaboration between the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation. Each year, County Health Rankings compiles, synthesizes, and analyzes various data points, using the model to then quantify and rank almost every city and county in the United States<sup>1</sup>. Indicators that determine the ranking include but are not limited to: life expectancy; poor physical or mental health days; low birthweight; adult smoking; adult obesity; physical inactivity; uninsured; flu vaccination; high school graduation; unemployment; violent crime; air pollution; housing problems; and commute to work alone.

County Health Rankings not only shows where a county might need to improve in terms of health but also highlights opportunities to improve health equity and mitigate health disparities. County Health Rankings also provides a library of policies, programs, and system changes that have been successfully implemented throughout the country. This library – What Works for Health – serves as an evidence-based roadmap that can help a community move to action in order to improve their ranking. County Health Rankings also provides an Action and Partner Centers, which can help communities take the first steps to change and connect to resources.

### **In the 2019 County Health Rankings, Virginia Beach City is ranked 23 of 133 counties within the Virginia.**

As mentioned above, the indicators included in the County Health Rankings are diverse and represent a comprehensive perspective of the social determinants of health. Many – and more – of these specific indicators that comprise the 2019 County Health Rankings are discussed in the remainder of this report.

## Demographics

The population of Virginia Beach is growing more slowly than the state of Virginia. Population by sex is consistent with state levels, though the median age by sex is lower in Virginia Beach than the state median, indicating the Virginia Beach has a younger population in the community.

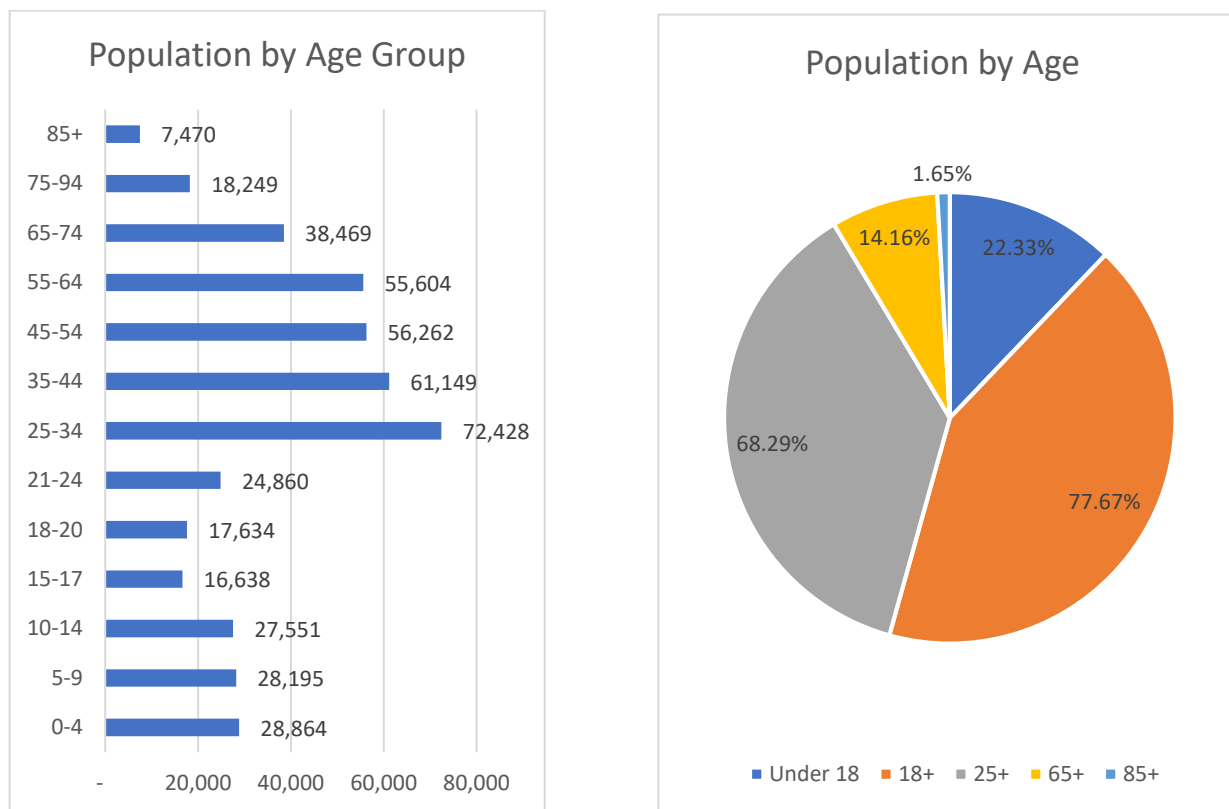
	2010 Census Population	2015 Population Estimate	2019 Population Estimate	Percent Change 2010 to 2019
<b>Virginia Beach</b>	437,994	452,745	453,373	3.51%
<b>Virginia</b>	8,001,024	8,382,993	8,554,008	6.91%

Table 1: Population Estimates, 2010, 2015, and 2019 and Percent Population Change 2010 to 2019, Virginia Beach and Virginia

<sup>1</sup> 2019 County Health Rankings, University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation, Retrieved from <http://www.countyhealthrankings.org/app/virginia/2019/rankings/virginia-beach-city/county/outcomes/overall/snapshot>

Source: Greater Hampton Roads Connects

The median age of Virginia Beach residents is 36.2 years, which is 2.3 years younger than the median age of the population statewide. The largest age group in Virginia Beach are those between the ages of 25-34 years, accounting for 16.36% of the population, followed by ages 35-44 (13.35% of the population). The smallest age group are those 85 years and older, accounting for only 1.59% of the Virginia Beach population.



Figures 1 & 2: Virginia Beach Population by Age Group (count) and Virginia Beach Population by Age (percentage), 2019  
Source: Greater Hampton Roads Connects

Just over half of the Virginia Beach population is female (50.80%); males thus comprise 49.20% of the population, as shown in Figure 3.

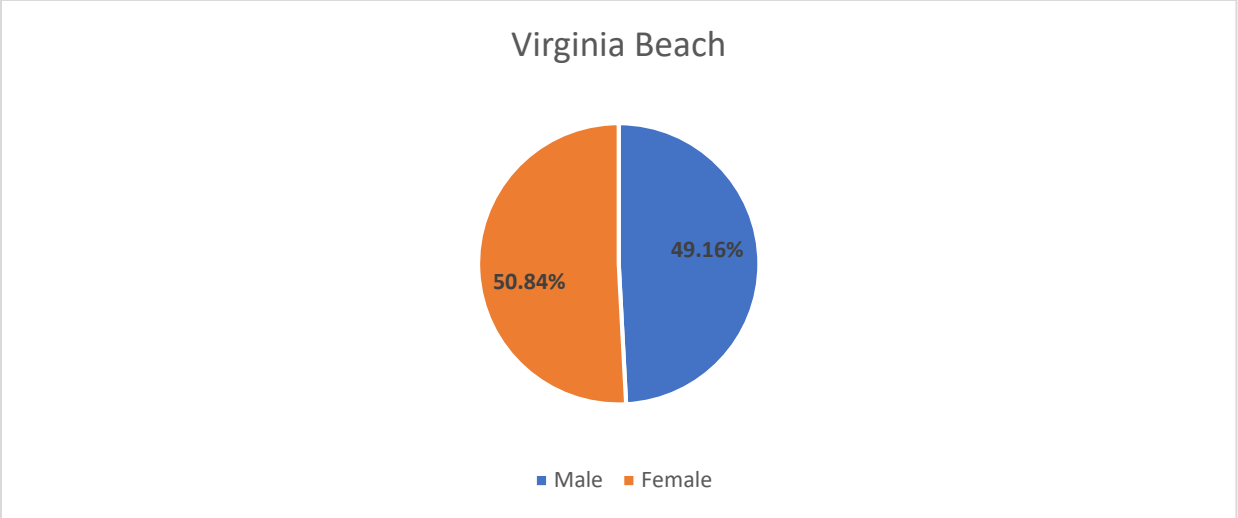
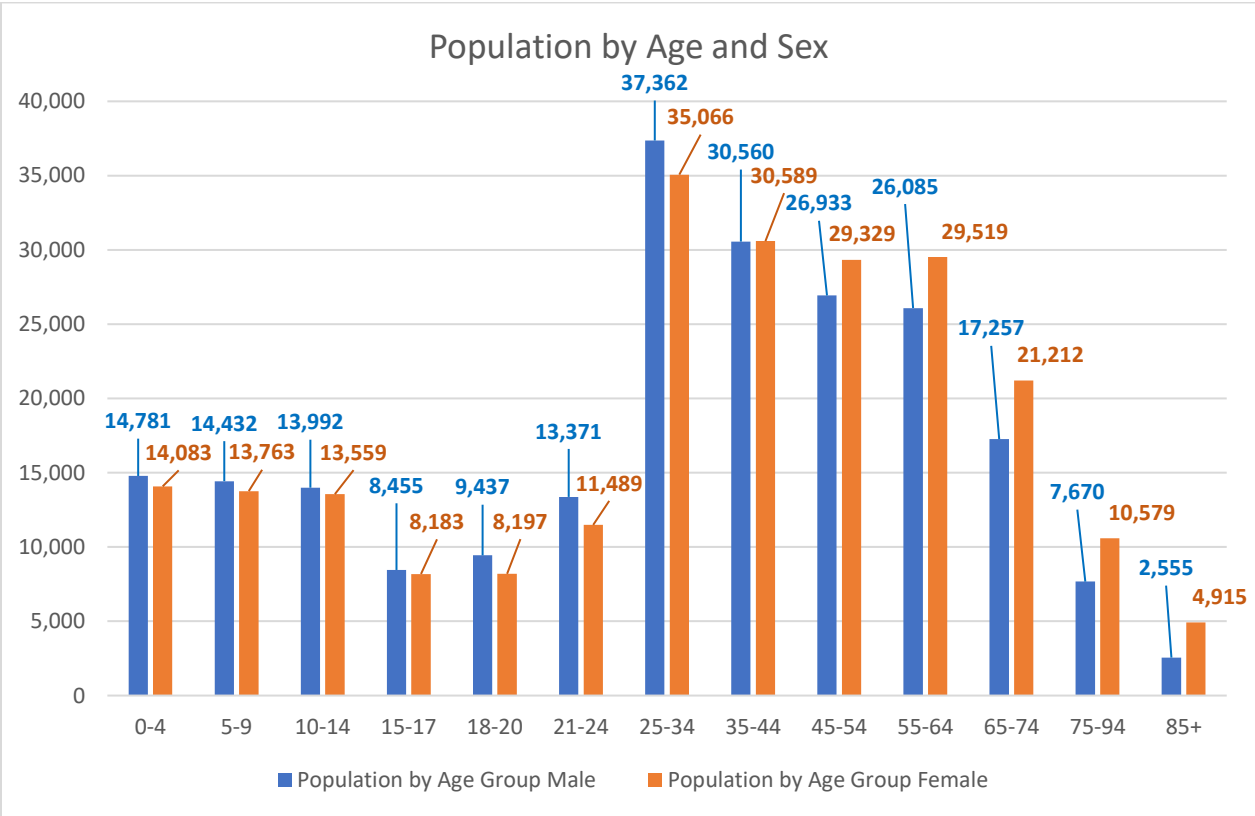
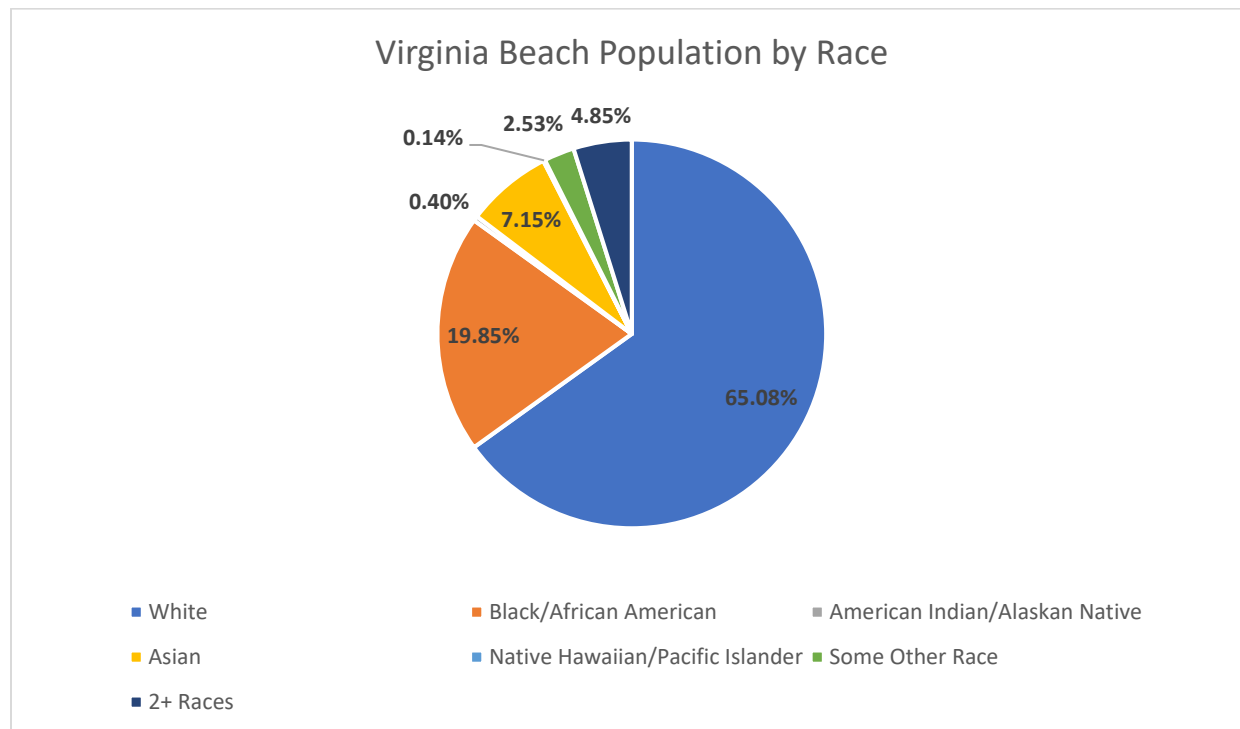


Figure 4, shown below, compares the Virginia Beach population by age and sex. Males represent a larger proportion of the population until ages 35-44; females then become the larger sex through the end of life.



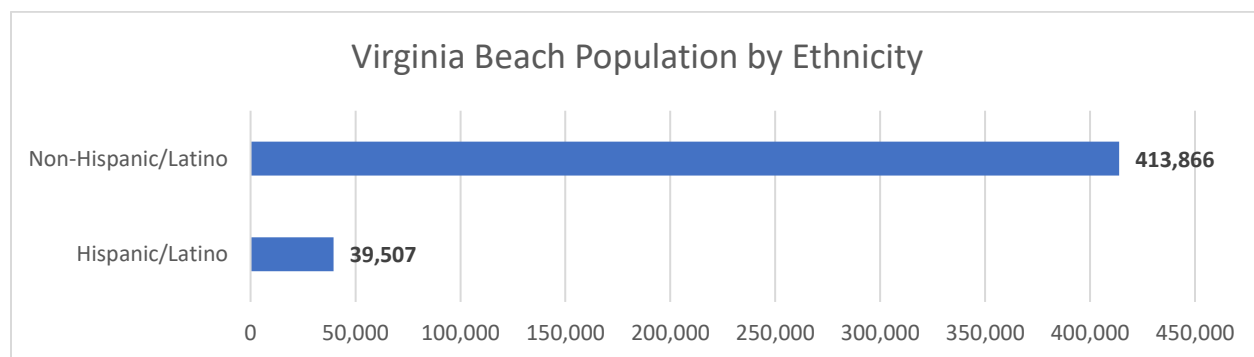
Figures 3 & 4: Virginia Beach Population by Sex (percentage) and Virginia Beach Population by Age and Sex (count), 2019  
 Source: Greater Hampton Roads Connects

While still predominantly white, Virginia Beach is showing positive trends in increased diversity, with Black/Africa Americans making up the second largest group by race.



**Figure 5: Virginia Beach Population by Race (percentage), 2019**  
Source: Greater Hampton Roads Connects

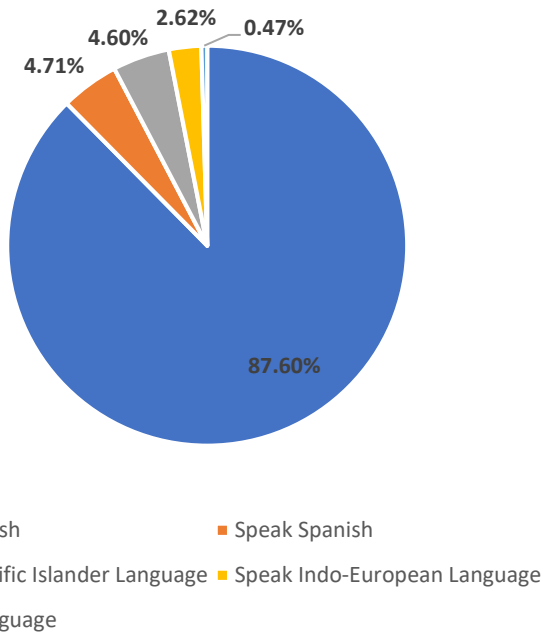
The ethnic composition of Virginia Beach remains predominantly Non-Hispanic/Latino,



**Figure 6: Virginia Beach Population by Ethnicity (count), 2019**  
Source: Greater Hampton Roads Connects

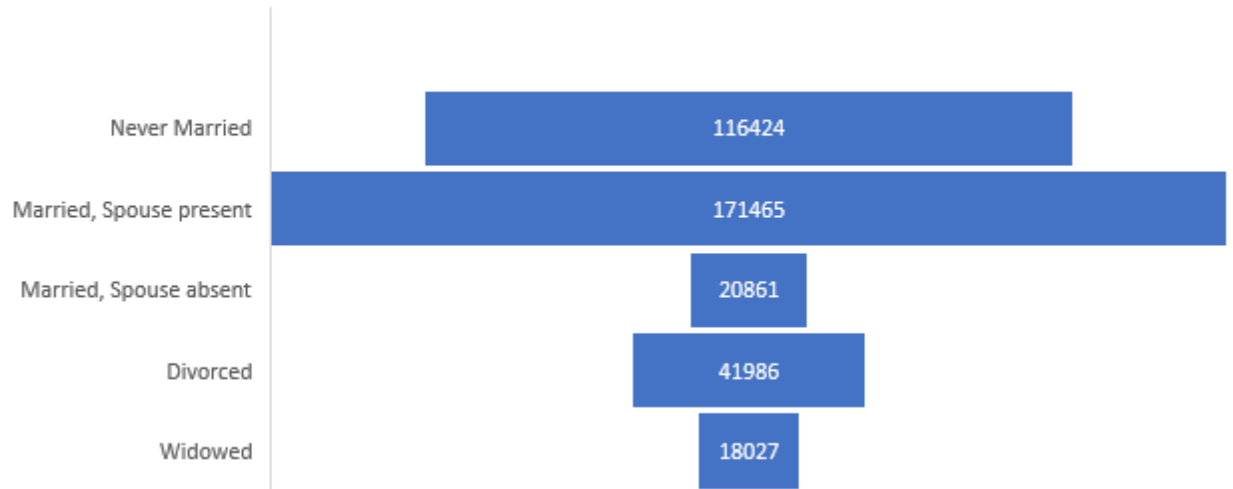
More than 88% of Virginia Beach residents report English as the only language spoken at home by residents age 5 years and older. Asian/Pacific Islander languages and Spanish are the two most common non-English languages in Virginia Beach.

Population Age 5+ by Language Spoken at Home



The majority of Virginia Beach residents, age 15+, are married or have been married, collectively representing 69% of the population; whereas those who have never been married account for only about 31%, or 114,834 residents.

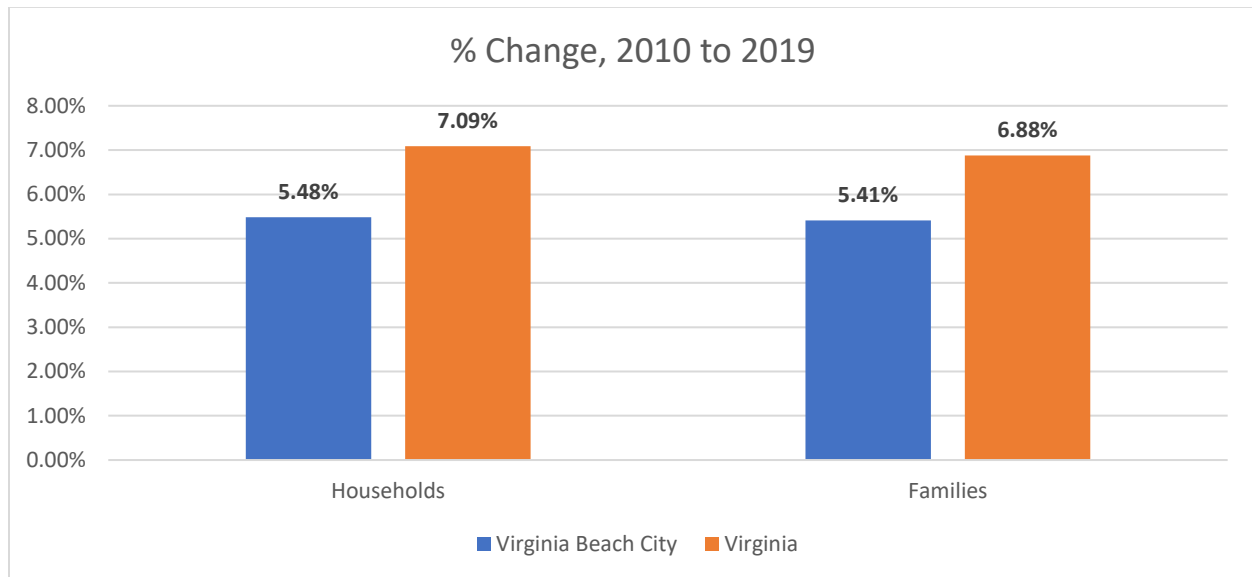
Population Age 15+ by Marital Status



Figures 7 & 8: Virginia Beach Population Age 5+ by Language Spoken at Home and Population Age 15+ by Marital Status, 2019  
Source: Greater Hampton Roads Connects

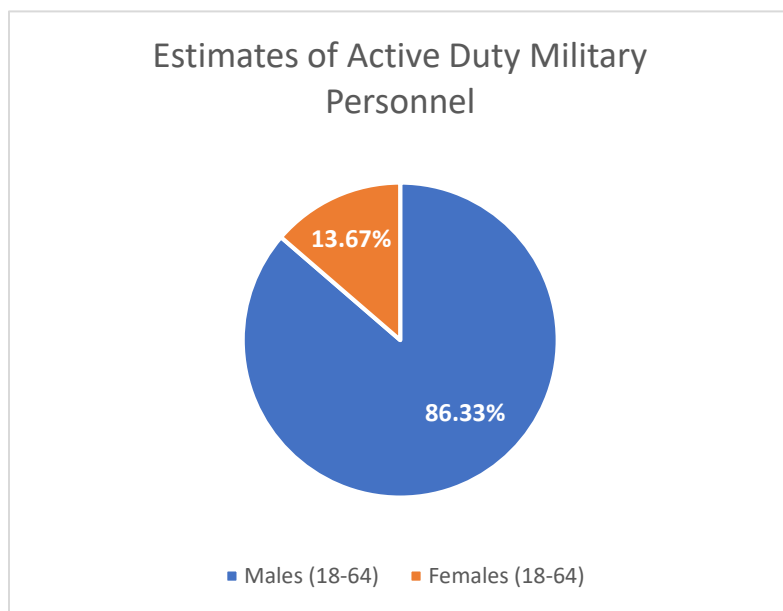


Virginia Beach has experienced a slower growth rate in the number of households and families within the city when the percent change from 2010 to 2018 is compared to Virginia. This lower growth rate is consistent with other metrics, such as the change in the number of housing units (please see section titled 'Home Ownership' for details).



**Figure 9: Comparison of the Percent Change in Households and Families in Virginia Beach and Virginia, 2010 to 2019**  
Source: Greater Hampton Roads Connects

Virginia Beach, and the Greater Hampton Roads region, is home to many military installations. Thus, a unique sub-population to consider when assessing the health and well-being of Virginia Beach is active duty military and veterans. According to estimates from the US Census Bureau, there are 31,087 active duty personnel in Virginia Beach. Data is not available to indicate how many active duty military dependents (spouses, children, aging parents, etc.) are represented in the Virginia Beach population.

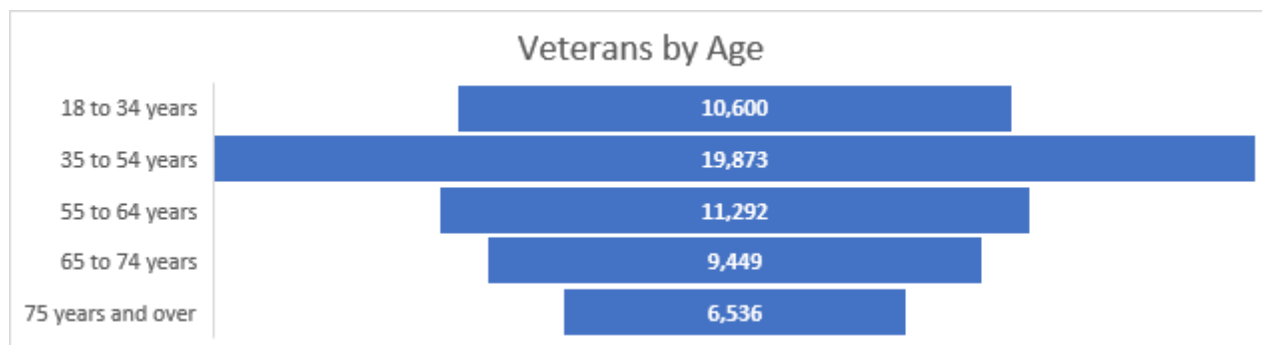


**Active Duty Estimates**

<b>Males (18-64)</b>	26,838
<b>Females (18-64)</b>	4,249
<b>Total Personnel</b>	31,087
<b>Percent of Virginia Beach Population</b>	7.1%

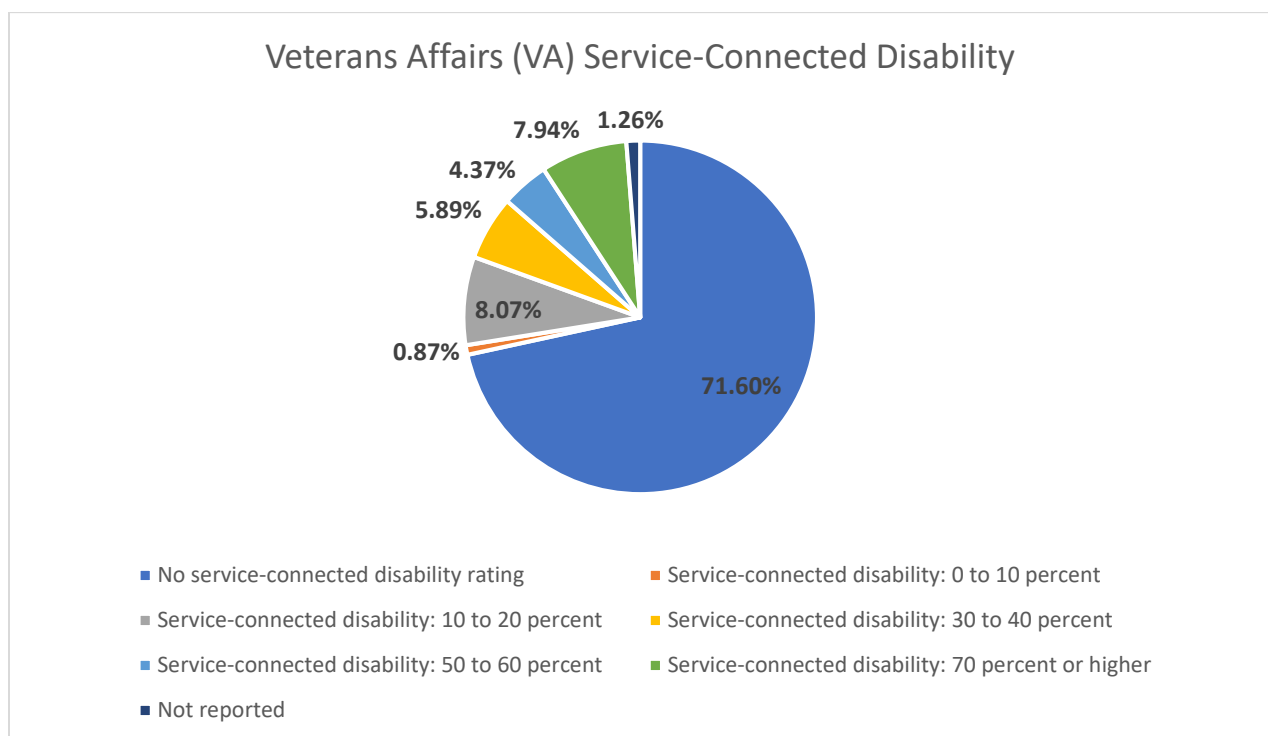
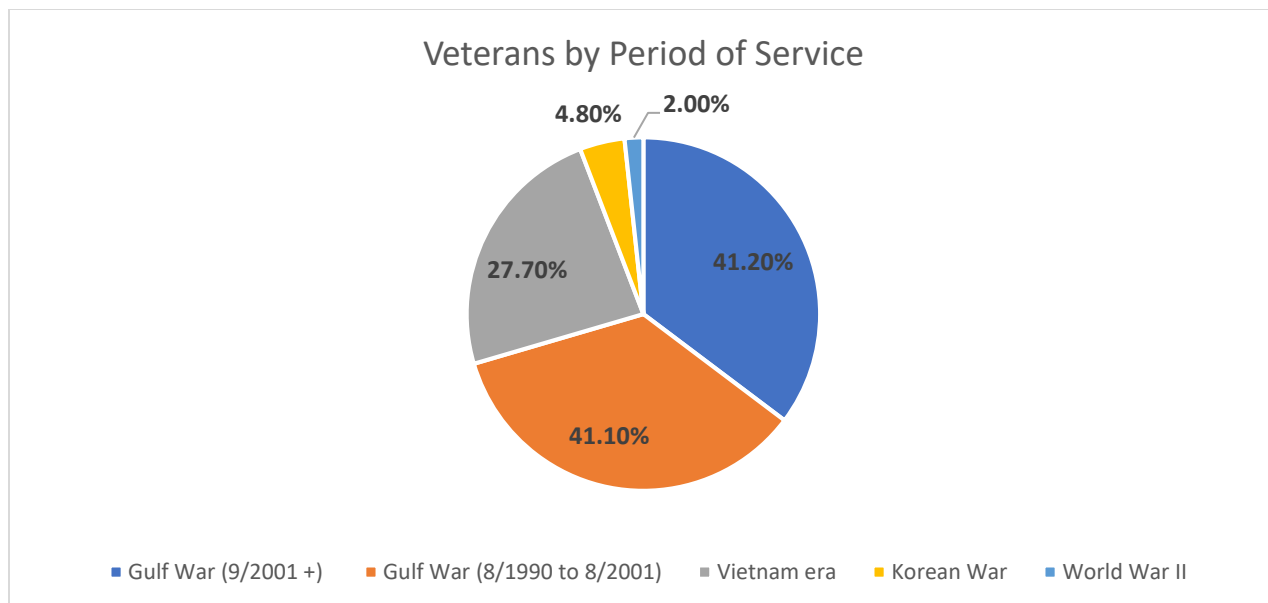
**Figure 10 and Table 2:**  
**Estimates of Active Duty Military Personnel in Virginia Beach, 2017**  
 Source: US Census Bureau

Data from the US Census Bureau also estimates the number of veterans living in Virginia Beach, with some 57,750 reported (or 13.18%) of the Virginia Beach population. Consistent with the number of active duty personnel by sex, there are more male veterans than female in Virginia Beach.



**Figure 11: Veterans by Age, Virginia Beach, 2017**  
 Source: US Census Bureau

As seen from Figure 12, the majority of veterans in Virginia Beach served during one or even both of the Gulf War eras (1990-2001 or post-9/11/2001), with another almost 28% who served during the Vietnam era. Figure 13 shows the rates of service-connected disability among Virginia Beach veterans, based on the rating scale used by Veterans Affairs (VA).

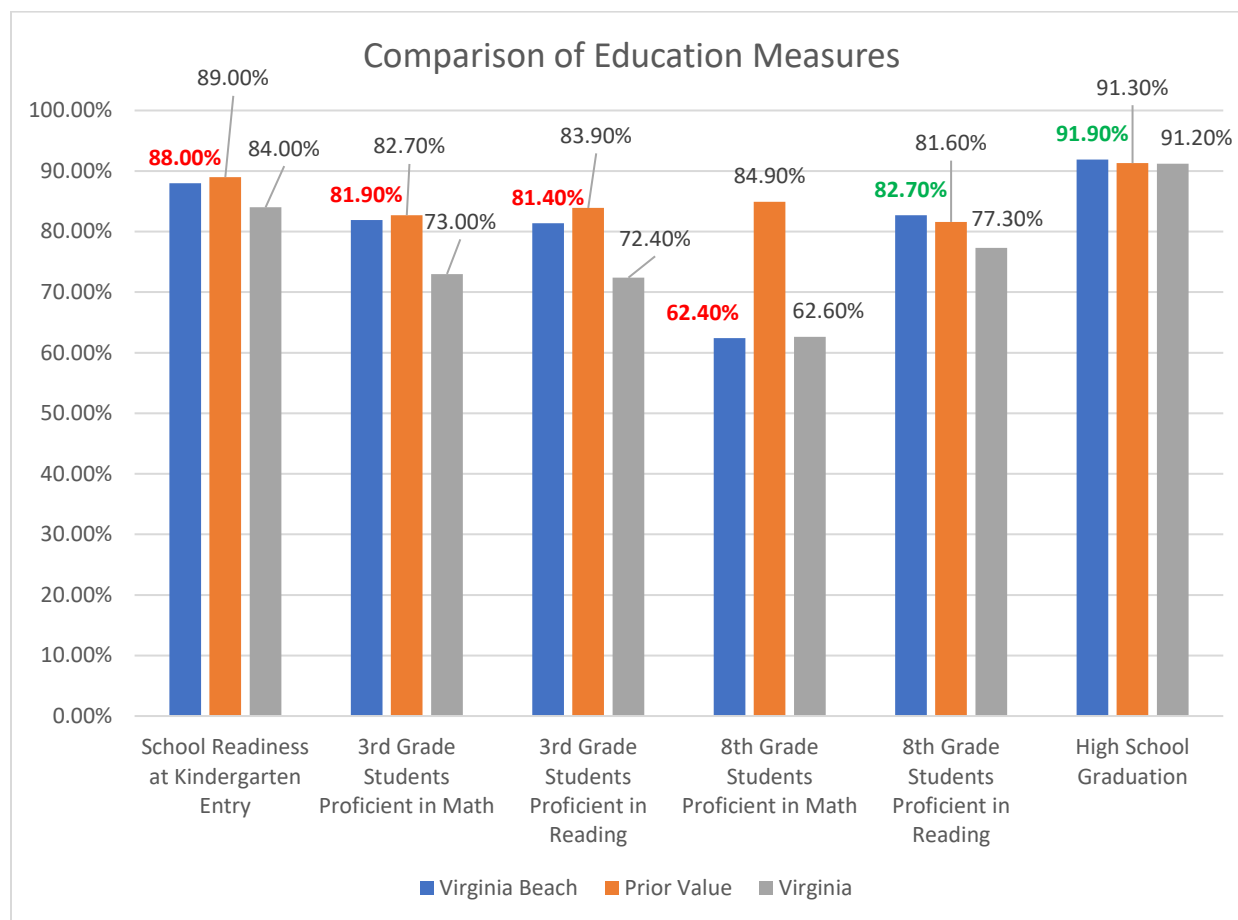


**Figures 12 and 13: Veterans by Period of Service, Virginia Beach and Veterans Affairs (VA) Service-Connected Disability, Veterans in Virginia Beach, 2017**  
**Source: US Census Bureau**

## Education

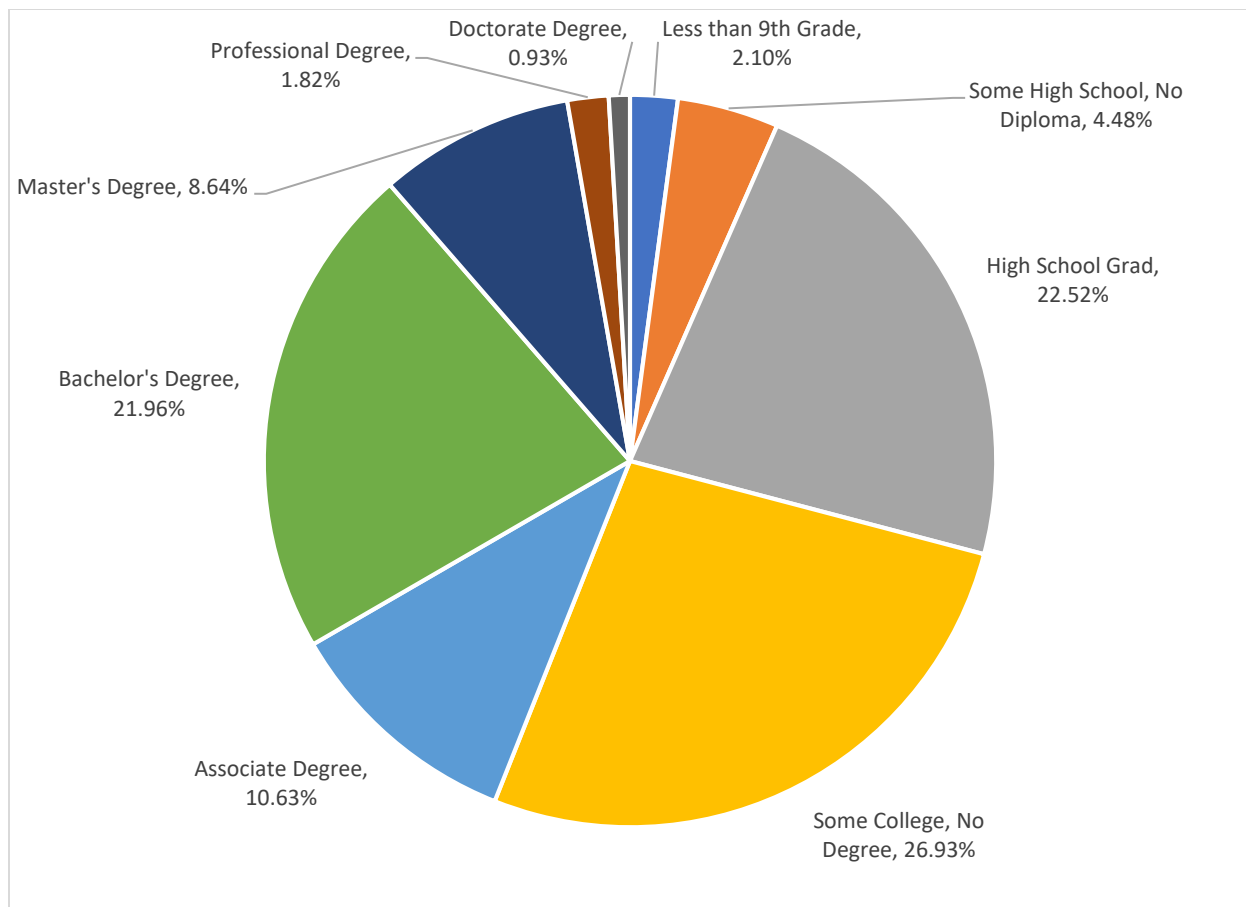
Education has historically been a major focus in the Virginia Beach community, with Virginia Beach performing better than the state in most areas, as seen in Figure 14 below. Current Virginia Beach values

are designated in red if the measure declined from the previous value and green if the measure improved.



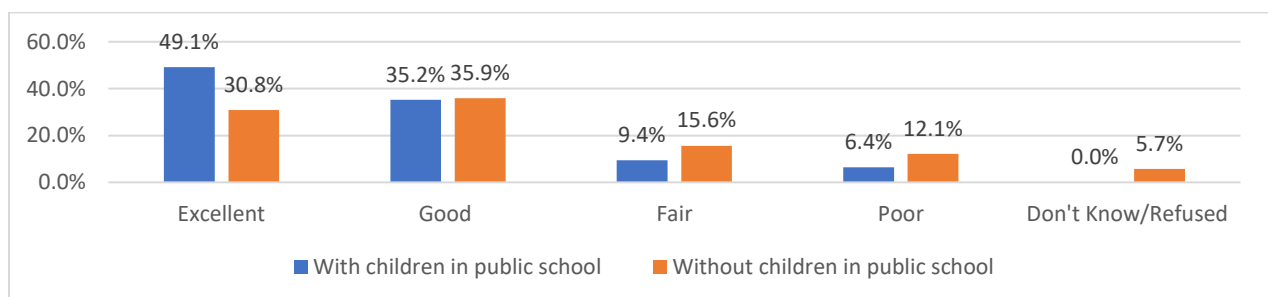
**Figure 14: Comparison of Various Education Measures, Virginia Beach Current, Virginia Beach Prior Value, Virginia Current, 2017-2018**  
Source: Greater Hampton Roads Connects

While the rate of high school graduation in Virginia Beach has surpassed the Healthy People 2020 goal of 87%, there is still some room for improvement. It is well known that education is among the most powerful and important determinants of present and future health. Investing in education is an investment in health and longevity. Most Virginia Beach residents, age 25+, have at least some college education, as shown in Figure 15.



**Figure 15: Virginia Beach Population 25+ by Educational Attainment, 2012-2016**  
**Source: Greater Hampton Roads Connects**

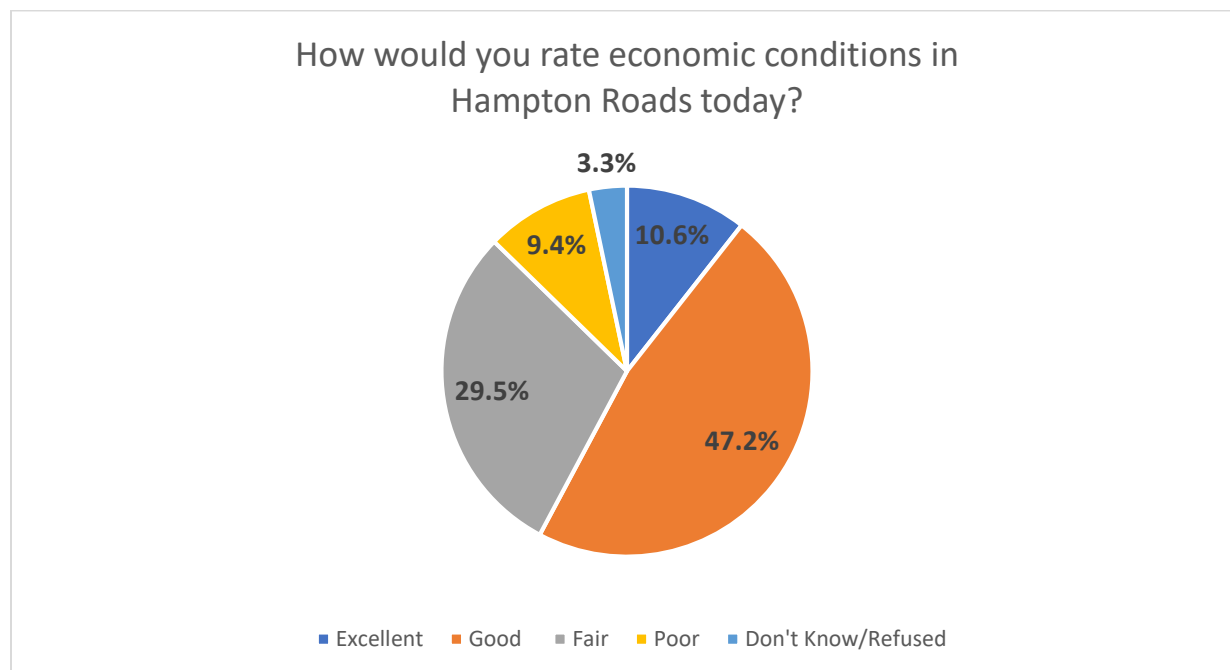
According to responses to the 2018 Life in Hampton Roads Survey, as developed and administered by the Social Science Research Center at Old Dominion University, Virginia Beach residents generally have positive perceptions of the quality of education provided by the Virginia Beach public school system, with those with children actually attending public schools reporting greater perceptions of excellent quality of education (49.1%) versus the general population, including those who do not have school-age children.



**Figure 16: Survey Results: How would you rate the quality of your local public school system? 2018**  
**Source: ODU Life in Hampton Roads Survey, 2018**

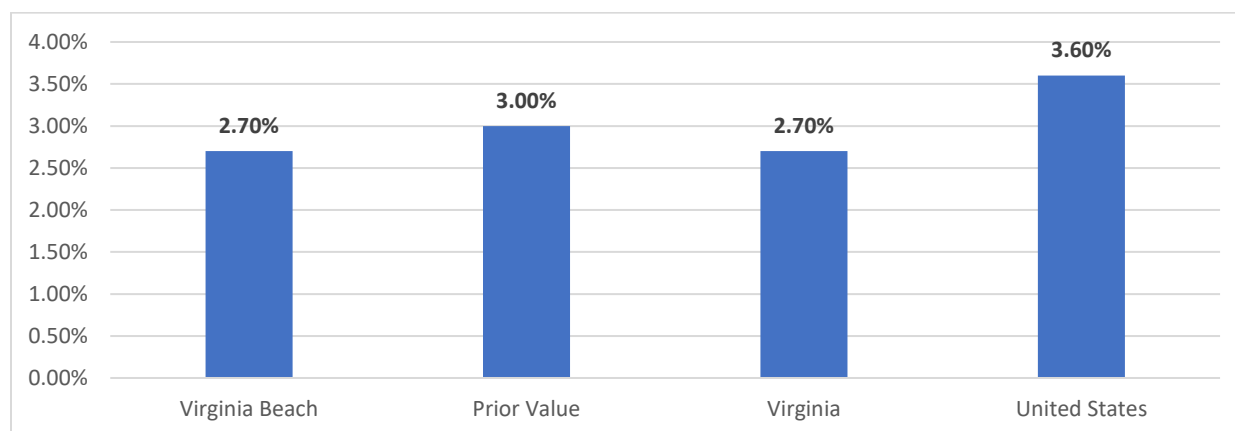
## Economy & Employment

The economy of a community has critical implications for access to health services, health behaviors, health outcomes, and health disparities. Virginia Beach respondents generally indicated that the economic conditions in the region are either Excellent or Good, as seen in Figure 17 below.



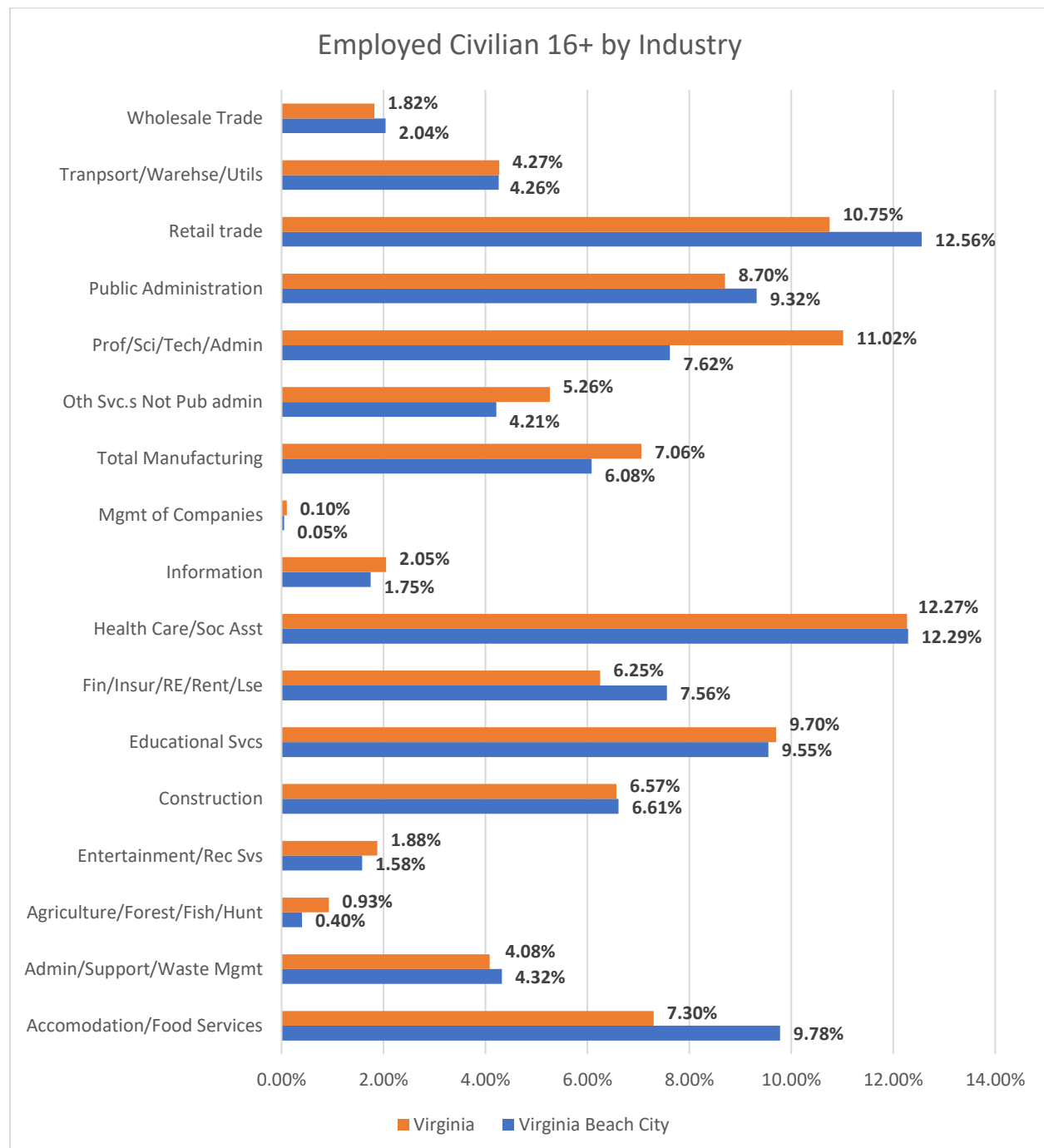
**Figure 17 Survey Results: Perception of economic conditions, 2018**  
Source: ODU Life in Hampton Roads Survey, 2018

A critical indicator that demonstrates the economic health of a population is unemployment rate. Figure 18 compares the unemployment rate of Virginia Beach to its prior value, to Virginia, and to the United States, as of September 2018. This data shows that unemployment in Virginia Beach has improved and is trending better than then national unemployment rate.



**Figure 18 Unemployment Rate Comparison, September 2018**  
Source: Greater Hampton Roads Connects

Virginia Beach is known by many as a city of tourism, with many vacationers visiting the city for beaches, refreshment, and outdoor activities. Thus, it is not surprising that the industries with highest civilian employment rates include Retail Trade and Accommodation/Food Services, as well as Health Care.



**Figure 19 Virginia Beach Employed Civilian Population 16+ by Industry, 2019**  
Source: Greater Hampton Roads Connects

## Income

46.59% of Virginia Beach households have incomes greater than \$75,000; 20.65% of households in Virginia Beach have an income less than \$35,000. When looking at median household income by race and ethnicity, Black/African Americans have a disproportionately lower median income.

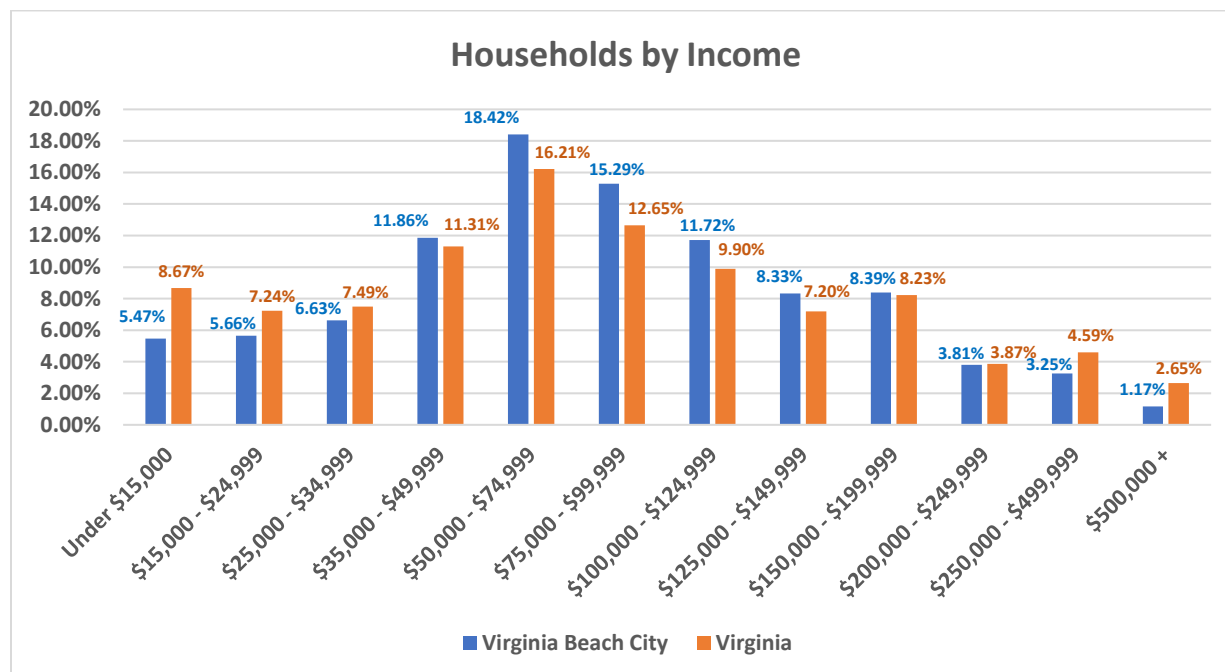


Figure 20 Comparison of Households by Income, Virginia Beach & Virginia, 2019

Source: Greater Hampton Roads Connects

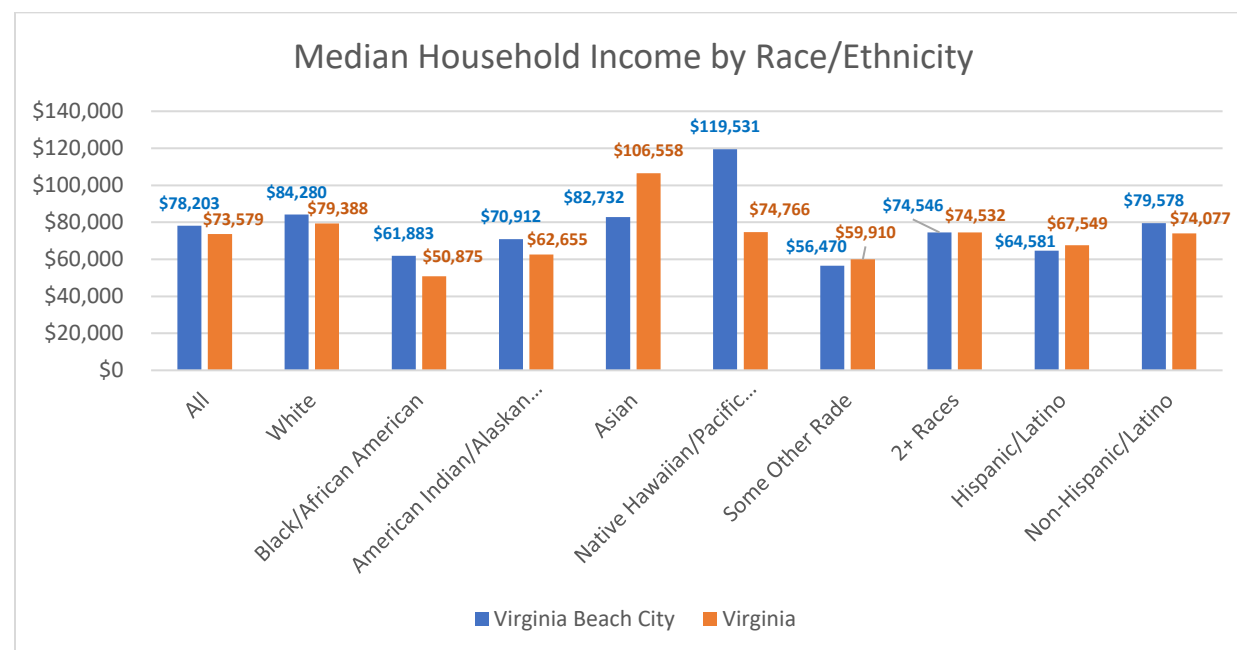


Figure 21 Virginia Beach and Virginia Median Household Income by Race & Ethnicity, 2019

Source: Greater Hampton Roads Connects



## Poverty Statistics

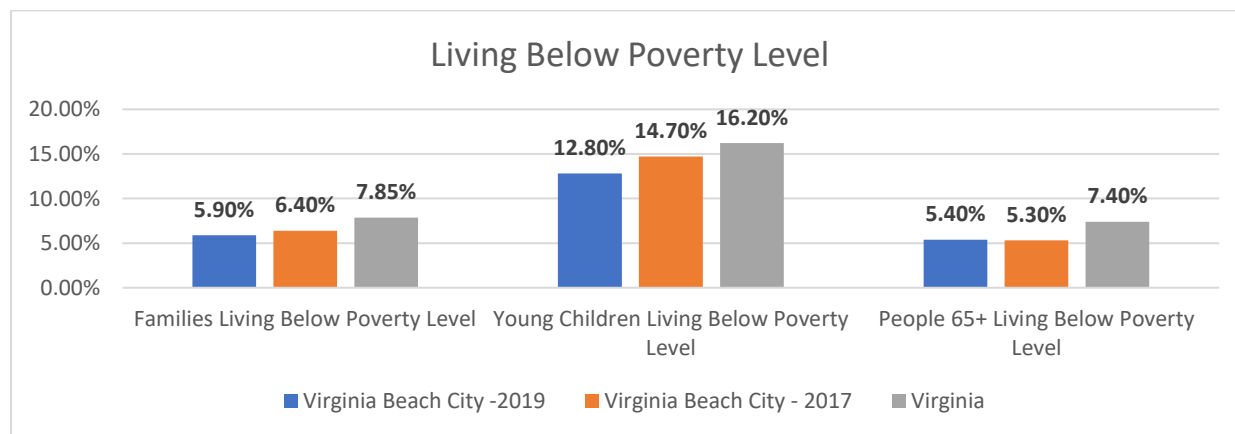
Poverty statistics are another tool to better understand the economic state of the community and the possible implications for health of that community. The first major poverty indicator is based on the poverty guidelines established by the US Department of Health and Human Services (DHHS) each year. These poverty guidelines are used by most federal and state assistance programs as part of the eligibility screening process, including even Medicaid and subsidies for Exchange Health Plans, as well as such programs as Temporary Assistance for Needy Families (TANF) and the Supplemental Nutrition Assistance Program (SNAP).

Table 3 shows the 2019 Poverty Guidelines released by the DHHS for 2019 for the 48 contiguous state and the District of Columbia.

PERSONS IN FAMILY/HOUSEHOLD	POVERTY GUIDELINE
1	\$12,490
2	\$16,910
3	\$21,330
4	\$25,750
5	\$30,170
6	\$34,590
7	\$39,010
8	\$43,430
9 or more	Add \$4,420 for each additional person

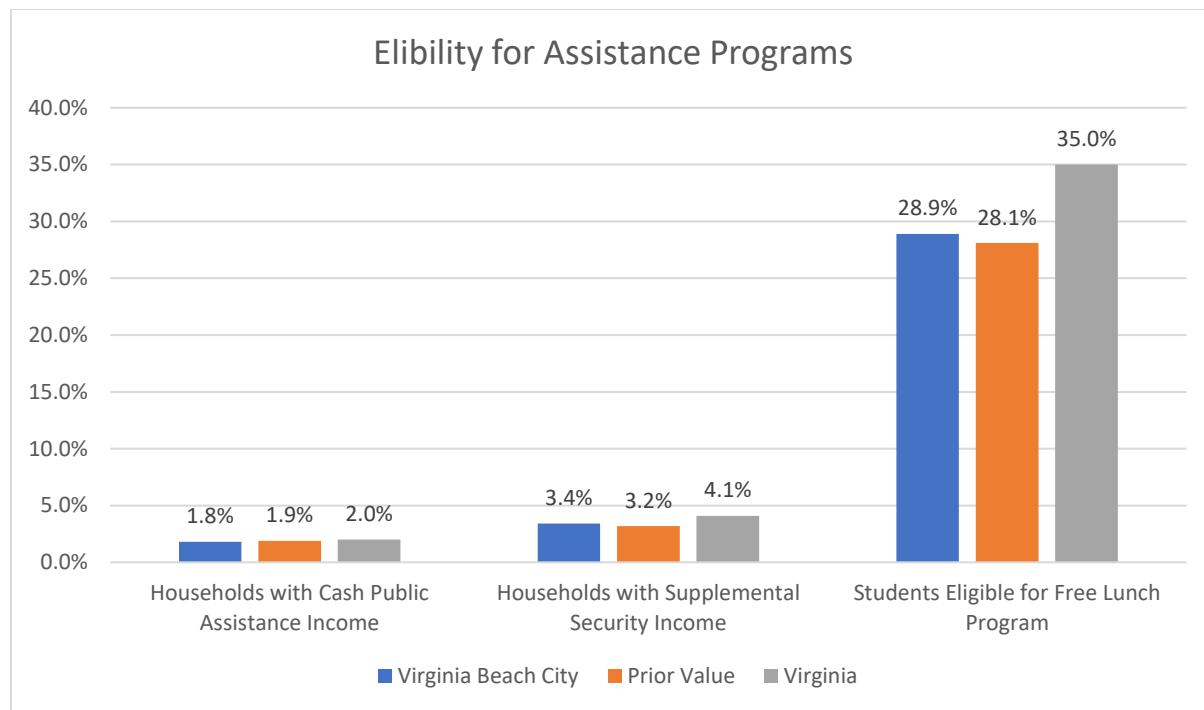
**Table 3 Federal Poverty Guidelines, 2019, 48 Contiguous States and District of Columbia**  
Source: US Department of Health and Human Services

Figure 22 below shows three different populations and compares the percent of each of those populations living below the poverty level currently in Virginia Beach, compared to previous value and Virginia rates. While Virginia Beach is less impacted in all three populations when compared to the state rates, both the Young Children Living Below Poverty Level and the People 65+ Living Below Poverty Level categories have seen a 0.10% increase since the prior value was recorded, whereas Families Living Below Poverty Level has improved by 0.2%.

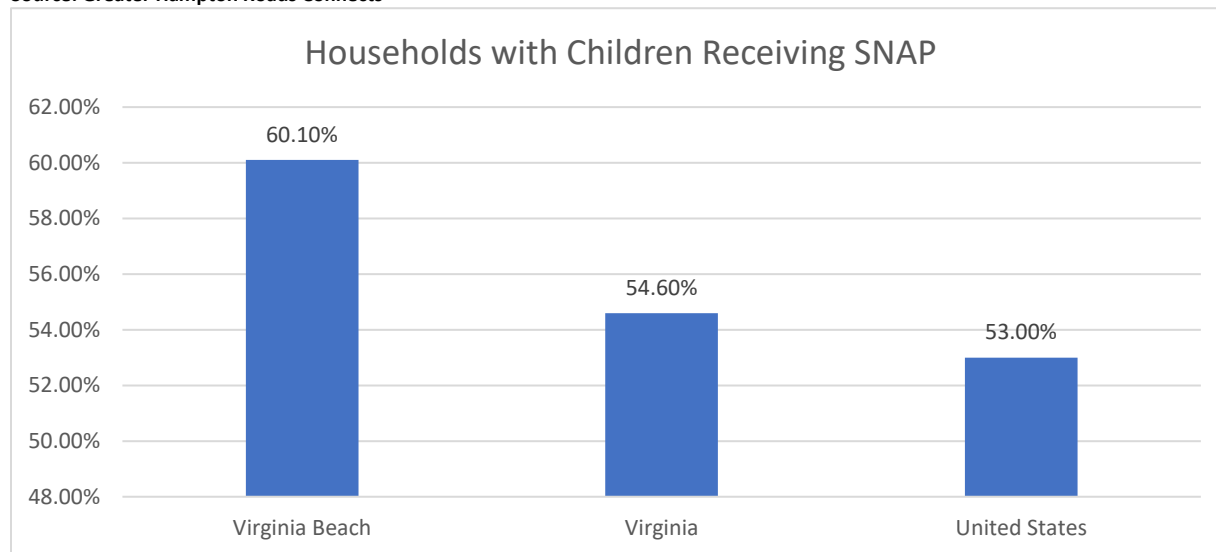


**Figure 22 Specific Populations Living Below Poverty Level, Virginia Beach, Prior Value, and Virginia, 2017 & 2019**  
Source: Greater Hampton Roads Connects

Figures 23 and 24 below provide additional details of the utilization of different assistance programs in the community. While Virginia Beach has lower rates of utilization of some of these programs in comparison to Virginia rates, Households with Children Receiving SNPA benefits is almost 6% higher in Virginia Beach than throughout the state and more than 7% higher than national averages.



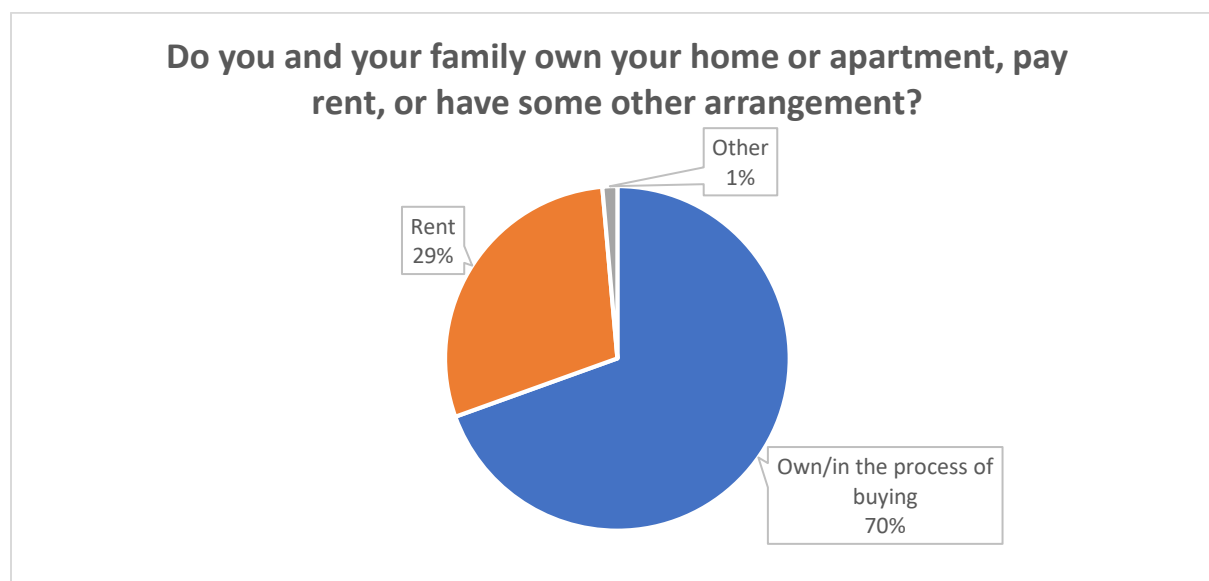
**Figure 23 Eligibility for Public Assistance Programs, Virginia Beach, Prior Value, and Virginia, 2012-2016**  
**Source: Greater Hampton Roads Connects**



**Figure 24 Households with Children Receiving SNAP, Virginia Beach, Virginia, and United States, 2012-2016**  
**Source: Greater Hampton Roads Connects**

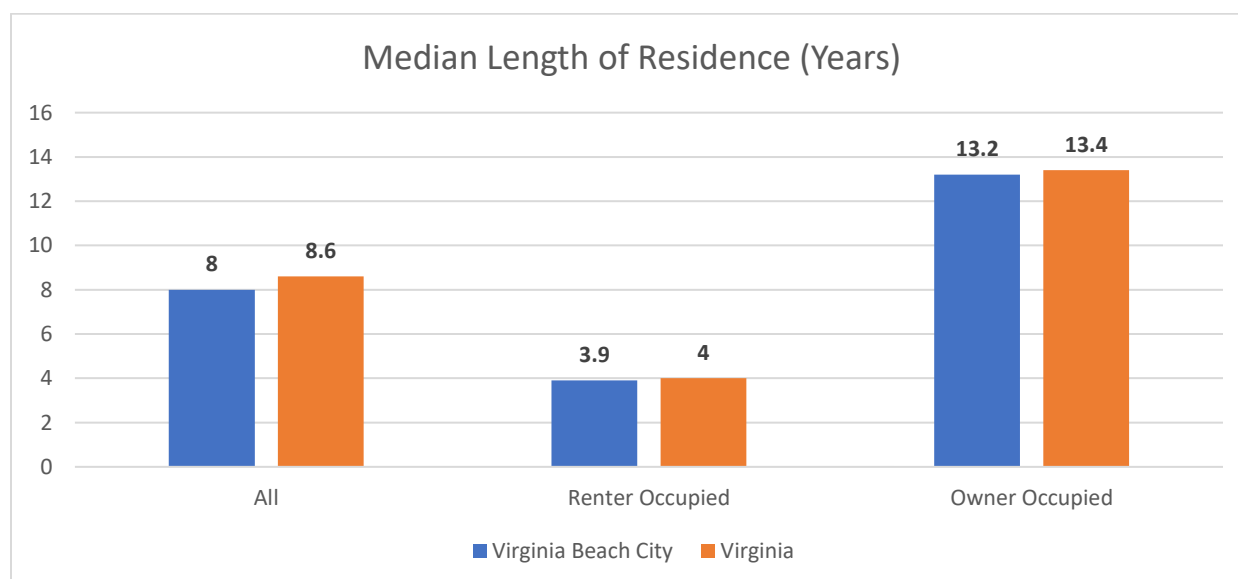
## Home Ownership

Virginia Beach residents who responded to the ODU Life in Hampton Roads Survey indicated that the majority own a home or were in the process of buying a home.



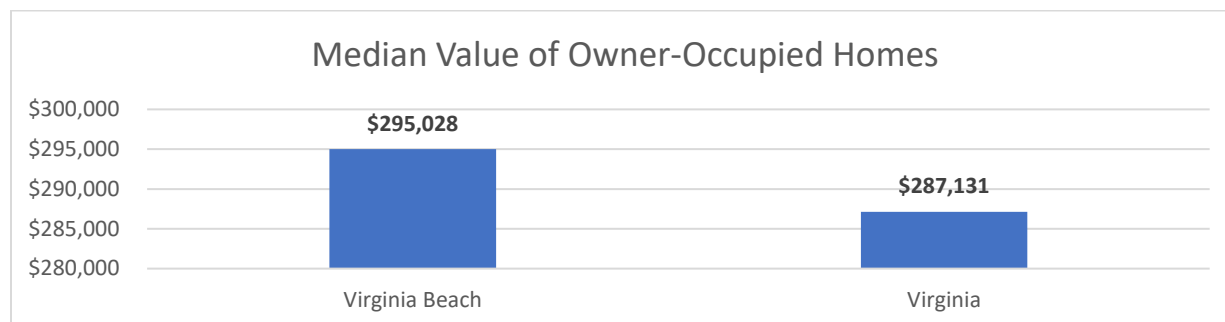
**Figure 25 Survey Results: Do you and your family own your home or apartment, pay rent, or have some other arrangement? 2018**  
Source: ODU Life in Hampton Roads Survey, 2018

The median length of residence in Virginia Beach is lower than statewide, possibly due to the higher density of active duty military personnel, often who are only in the area for two to three years before being stationed elsewhere.



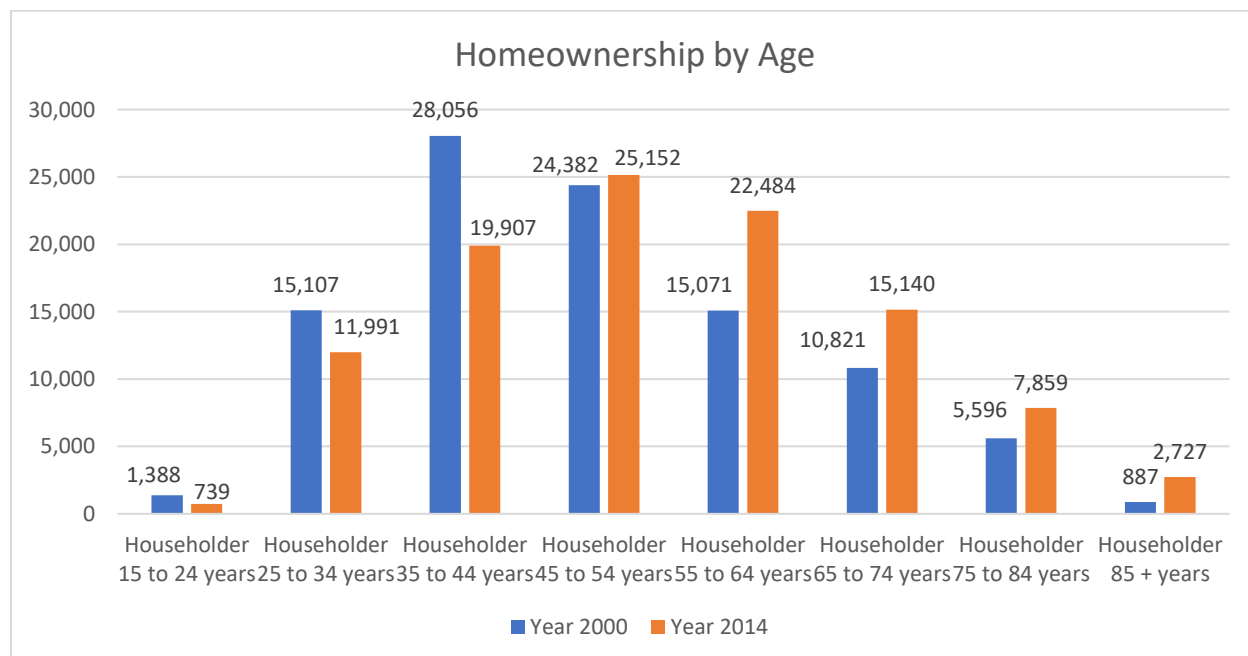
**Figure 26 Median Length of Residence (Years), Virginia Beach and Virginia, 2019**  
Source: Greater Hampton Roads Connects

Since 2010, the number of housing units has increased by 5.90% in Virginia Beach, as compared to 6.39% in Virginia. The median value of houses in Virginia Beach is higher than the state median. A 2005 report from the Virginia Beach Department of Housing indicated that in order to afford a home in Virginia Beach, buyers must make at least \$38 an hour, or more than \$79,000 per year, whereas renters in the area must have an income of at least \$45,760 per year; that same report indicated that in 2005 median house prices in Virginia Beach were around \$260,000. Applying that change in median value (8.18% change from 2005 to 2018) to the income needed to buy a home now, home buyers must earn at least \$41 an hour, or \$85,505 per year.



**Figure 27 Median Value of Homes, Virginia Beach and Virginia, 2019**  
Source: Greater Hampton Roads Connects

While more than half of Virginia Beach residents own a home, home ownership by age has changed in the last decade or so. As seen from the graph below, homeowners are getting older whereas younger adults, particularly those aged 25 to 44 years, are much less likely to own a home now than they were in 2000. Among those 25 to 34 years, there has been a 4% drop in homeownership from 2000 to 2014; among those 35 to 44 years, the drop in homeownership is more than 9%.



**Figure 28 Home Ownership by Age, Virginia Beach, 2000 and 2014**

Source: Virginia Beach Department of Housing

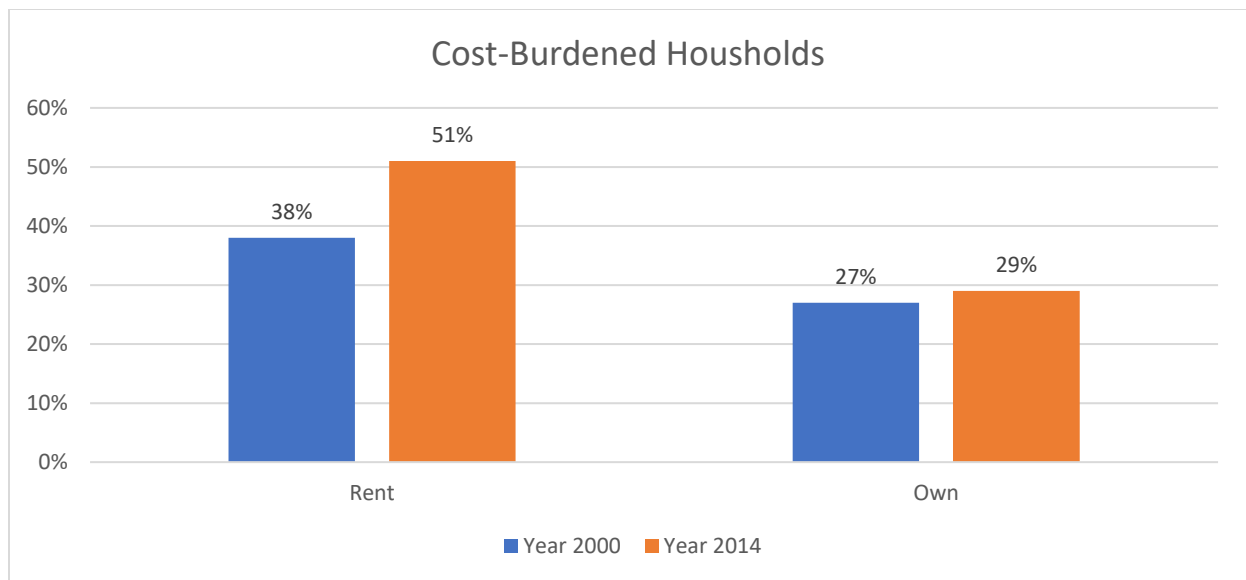
This shift in the age of homeowners is symptomatic of a larger issue with the cost of housing outpacing the incomes of those in Virginia Beach. The table below shows that Virginia Beach has higher rates of renters spending more than 30% of their household income on rent and more households that suffer with severe housing problems, defined as having at least one of the four following problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities. As seen in the Figure below, Virginia Beach residents are more likely to face both of these challenges than Virginia as a whole.



**Figure 29 Renters Spending 30% of More of Household Income on Rent, 2012-2016 and Severe Housing Problems, Virginia Beach and Virginia, 2010-2014**

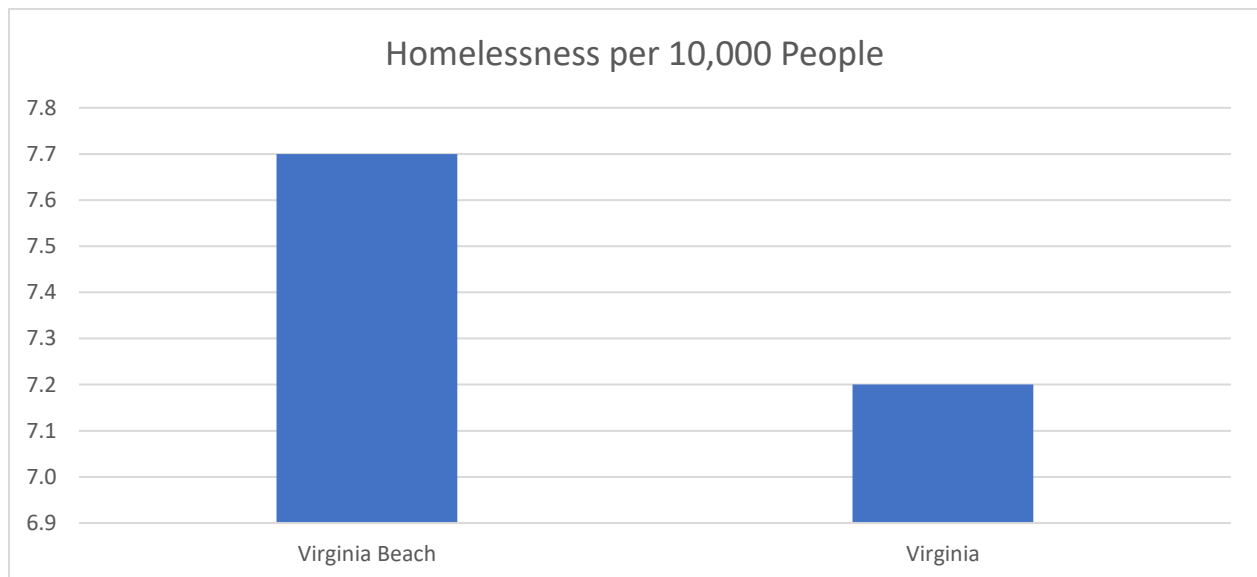
Source: Greater Hampton Roads Connects

The figure below provides additional detailed data regarding the state of cost-burdened households in Virginia Beach. The percentage of cost-burdened households who rent went up 13% from 2000 to 2014 while the number of cost-burdened households among homeowners increased only by 2%.



**Figure 30 Cost-Burdened Households, Rent and Own, 2000 and 2014**  
**Source: Virginia Beach Department of Housing**

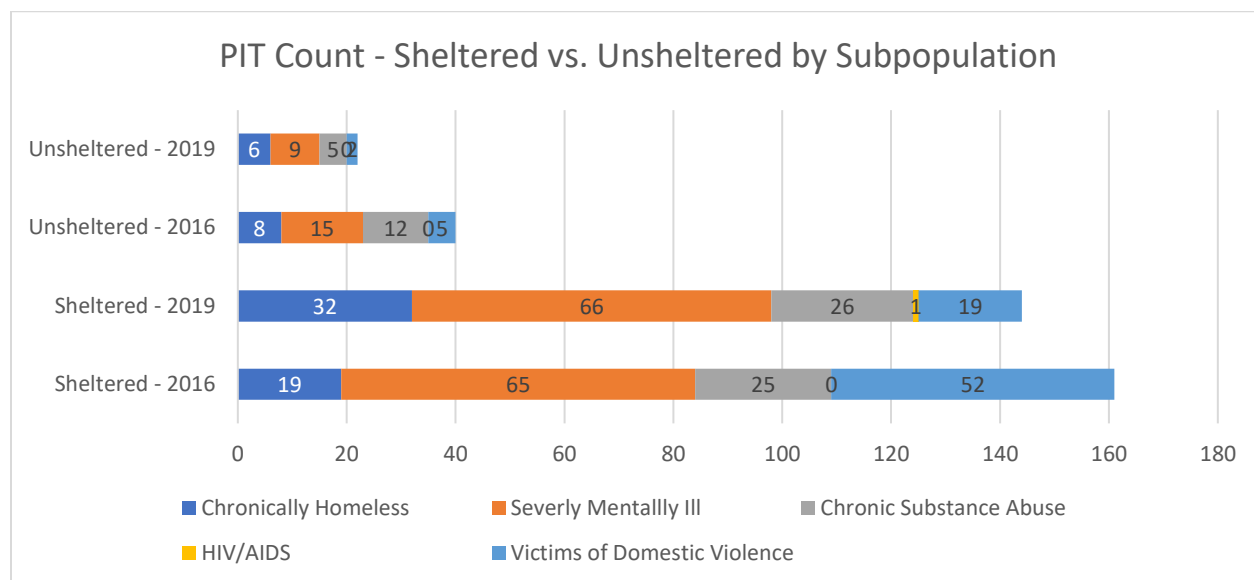
Virginia Beach has a higher rate of homelessness than the state rate, with 7.7 per 10,000 people of the general population as compared to 7.2 (Figure 31). However, homelessness in Virginia Beach appears to be trending downward.



**Figure 31 Homelessness per 10,000 People, Virginia Beach and Virginia**  
**Source: End Homelessness Coalition**

Each year, a one-day unduplicated count of sheltered and unsheltered homeless individuals and families is taken throughout the United States, known as the Point-in-Time (PIT) count. The PIT is a federal requirement, overseen by the U.S. Department of Housing and Urban Development (HUD). In order for the City of Virginia Beach to continue receiving federal funds to support homelessness interventions, the City must conduct the PIT.

Data collected during the 2019 PIT count shows some 260 persons experiencing homelessness in Virginia Beach. This represents a 33 percent (or 189 people) decline in homelessness since 2016 (Figure 32).



**Figure 32 PIT Count - Sheltered vs. Unsheltered by Subpopulation, Virginia Beach, 2016 vs 2019**

Source: Virginia Beach Housing Resource Center

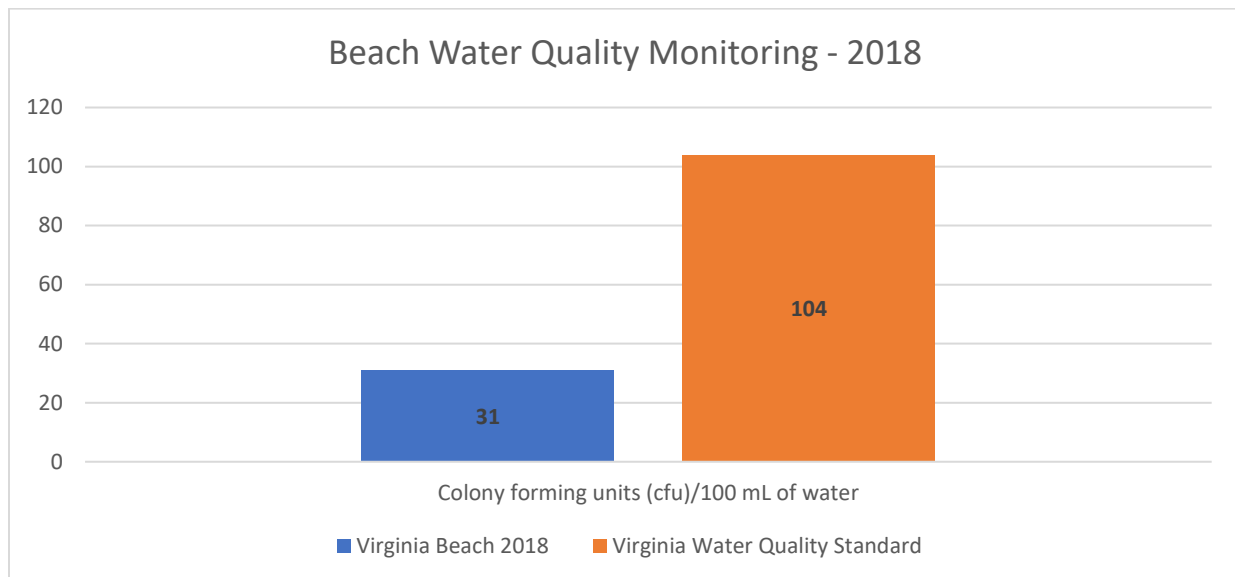
### Key Findings from the 2019 Virginia Beach Point-in-Time Count

- 260 people were homeless on a single night; 79% (206) were sheltered and 21% (54) were unsheltered.
- 10% (26) of homeless individuals were under the age of 18.
- Men comprised almost 59% present of the homeless population, women about 41%, and gender non-conforming less than 1%.
- The breakdown of the homeless population by race and ethnicity was as follows:
  - o White 41.9%
  - o Black/African-American – 49.6%
  - o American Indian or Alaska Native – 1.2%
  - o Native Hawaiian or Other Pacific Islander – 1.5%
  - o Multiple Races – 5.8%
  - o Non-Hispanic/Latino – 93.1%
  - o Hispanic/Latino – 6.9%
- Veterans made up about 16% (41 people) of the homeless population.

## Physical Environment

As a coastal city with a beach access, it is important that Virginia Beach regularly monitor the water quality, especially bacteria levels, of the beach water within Virginia Beach to ensure safety of residents as well as the many visitors who come to enjoy the Virginia Beach oceanfront. Figure 33 below shows the average results of the beach water quality monitoring conducted in 2018, showing that the beach

water quality in Virginia Beach was substantially better than the standard used to determine water quality and safety.

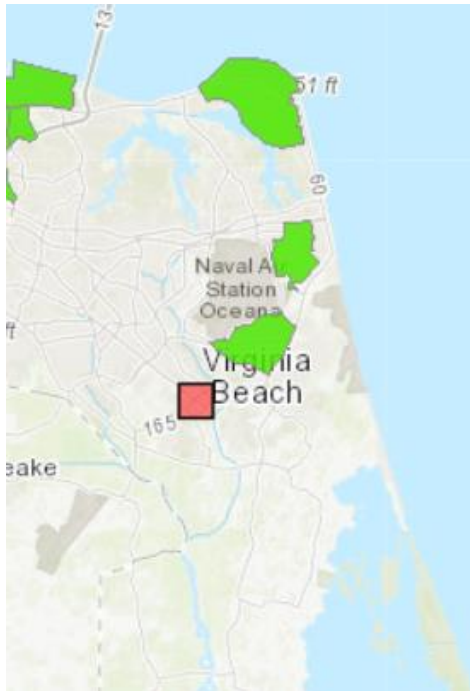


**Figure 33 Beach Water Quality Monitoring, 2018**  
**Source: Virginia Beach Department of Public Health**

## Built Environment

The environment we build – our roadways, parks, food stores, restaurants – have critical implications for our health, especially our health behaviors, which will be discussed later in this report. The following table provides details on these characteristics in Virginia Beach.

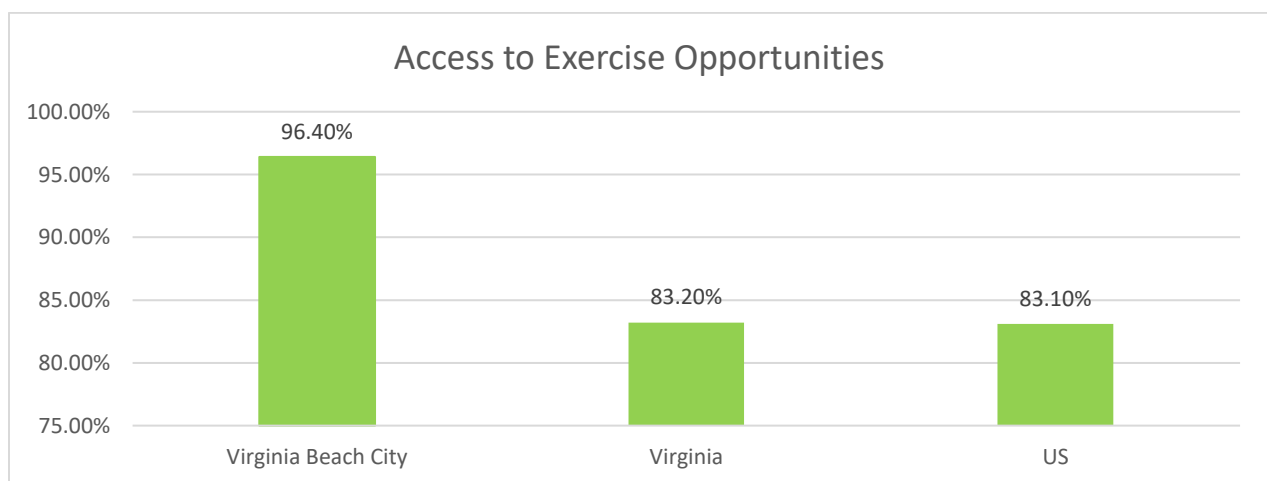




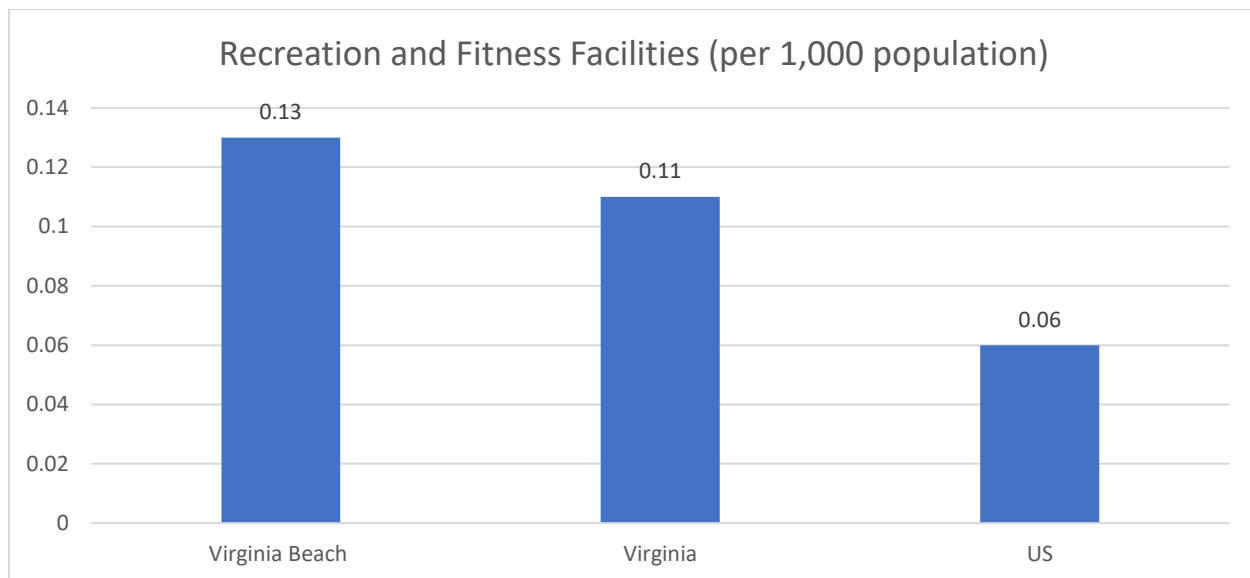
Access to affordable nutritious foods is a critical factor for healthy eating and overall health. The Food Atlas, a comprehensive data source from the Economic Research Service of the U.S. Department of Agriculture (USDA), is a useful tool in visualizing census tracts within Virginia Beach that are known as food deserts. A food desert is a low-income census tract where a substantial portion of the population have low access to a supermarket or full-service grocery store. In the map (Figure 34) the green areas within the Virginia Beach city limits represent census tracts in which at least 500 persons or 33 percent of the population of the census tract are low income and live more than a mile from a supermarket of full-service grocery store. The most recently available data shows that there are only 3 census tracts that qualify as food deserts in Virginia Beach now, an improvement from the 6 that were noted in the 2016 CHA.

**Figure 34 Food Deserts, Virginia Beach, 2017**  
Source: USDA Economic Research Service, Food Atlas

Figures 35 and 36 depict the environment that Virginia Beach provides for its residents to exercise and enjoy the outdoors. When compared to the Virginia and the United States, more Virginia Beach residents (approximately 13.2% more) have access to free areas to exercise. Virginia Beach offers more than 290 parks and park facilities, covering over 7,000 acres, with over 100 miles of trails available for walking, running, and biking. Virginia Beach also boasts various additional amenities, such as dog parks, skate parks, fishing areas, kayaking, and beach and boating facilities. The City of Virginia Beach owns and operates seven Recreation Centers, each includes an indoor swimming pool, cardio and weight training equipment, a gymnasium, and group fitness areas, as well as short-duration childcare, for a small monthly fee (VBDPR, 2019). Private gyms and fitness facilities are also readily available throughout Virginia Beach.

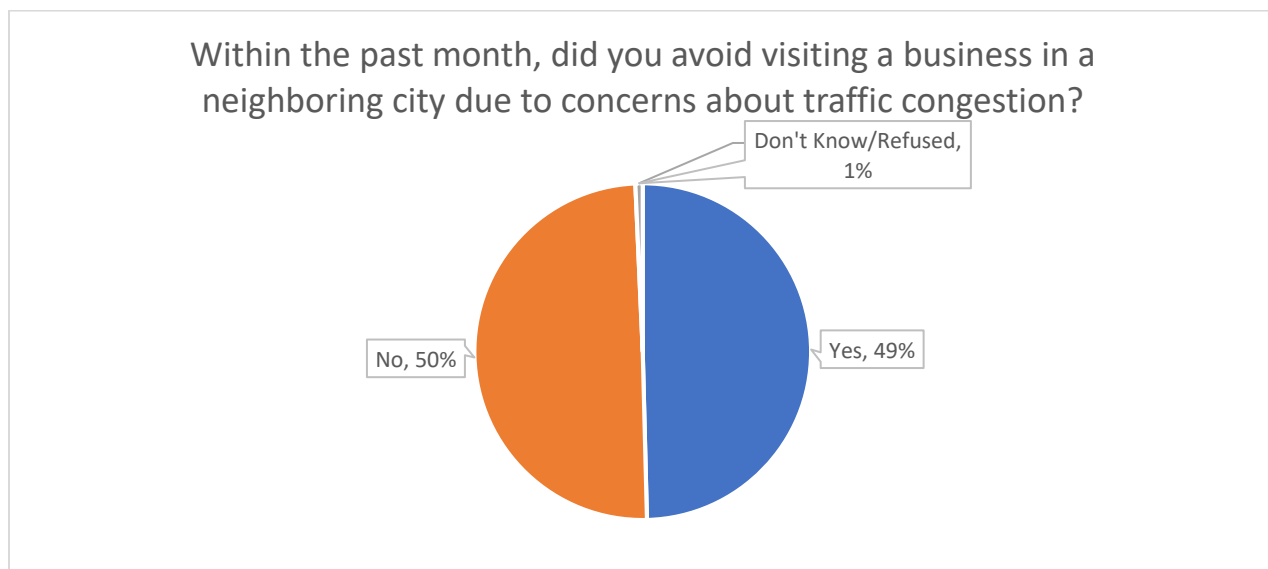


**Figure 35 Access to Exercise Opportunities, Virginia Beach, Virginia, and United States, 2018**  
Source: Greater Hampton Roads Connects



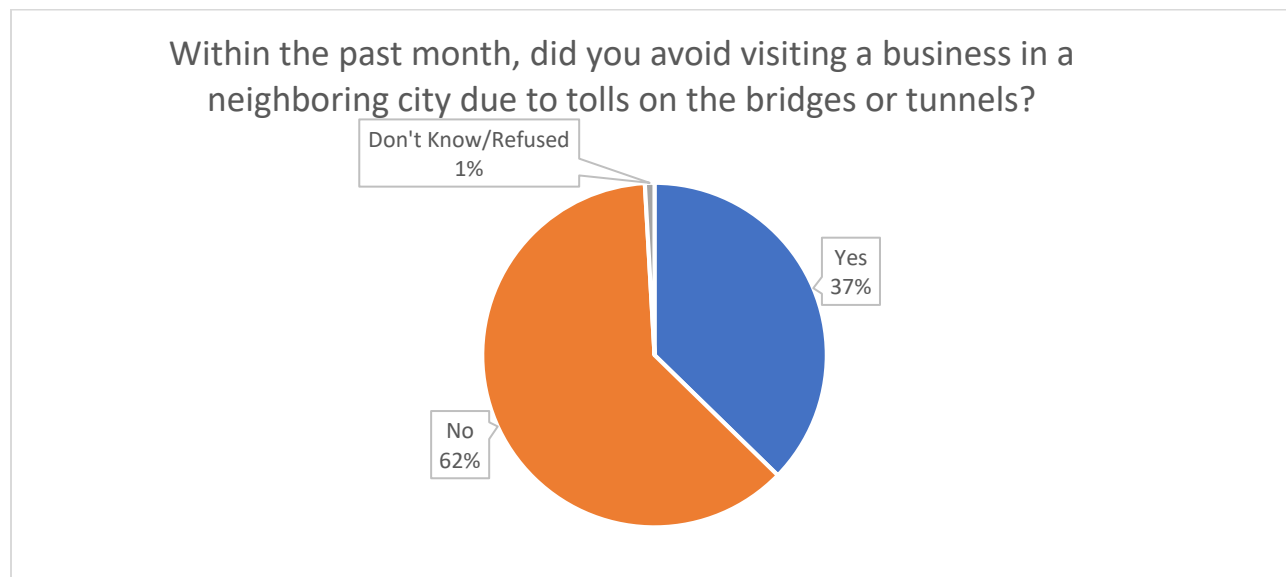
**Figure 36 Recreation and Fitness Facilities (per 1,000 population), Virginia Beach, Virginia, and United States, 2014**  
**Source: Greater Hampton Roads Connects**

Traffic is a unique challenge and concern among Virginia Beach residents and the whole of Hampton Roads. Given the unique location of the city and the region on the southeastern coast of Virginia, the abundance of water ways makes efficient traffic patterns a concern, especially on many of the highways that include bridges or tunnels, some of which have tolls to use those roadways. Figure 37 shows that almost half of Virginia Beach residents were concerned about traffic and that concern impacted their decisions about whether or not to visit a business in a neighboring city. Figure 38 shows that more than 1/3 of Virginia Beach residents (37%) reported that tolls on a bridge or tunnel influenced their decision to visit a business in a neighboring city.



**Figure 37 Survey Results: “Within the past month, did you avoid visiting a business in a neighboring city due to concerns about traffic congestion? 2018**

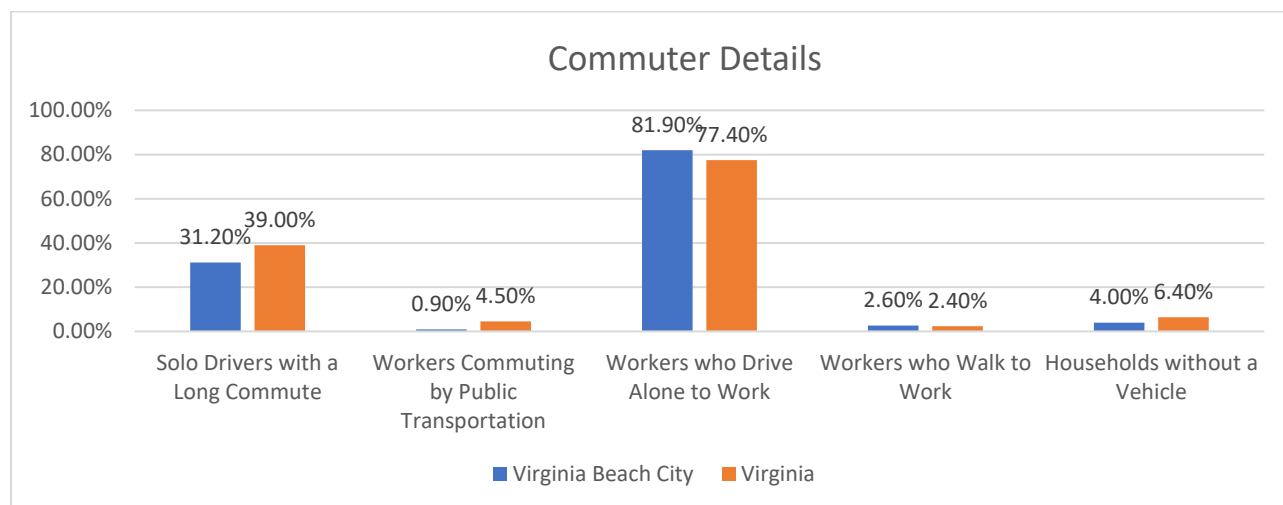
Source: ODU Life in Hampton Roads Survey 2018



**Figure 38 Survey Results: “Within the past month, did you avoid visiting a business in a neighboring city due to tolls on the bridges or tunnels?” 2018**

Source: ODU Life in Hampton Roads Survey 2018

Despite efforts over the last few years to increase the accessibility and functionality of public transportation in Virginia Beach and the Hampton Roads region, Virginia Beach still falls short of the Healthy People 2020 targets for Workers Commuting by Public Transportation (5.5%) and Workers who Walk to Work (3.1%). Figure 39 demonstrates that the majority of the Virginia Beach population drive alone to work; the average commute time for Virginia Beach is 26 minutes, which is 5 minutes shorter than the state average.



**Figure 39 Commuter Details, Virginia Beach and Virginia, 2012-2016**

Source: Greater Hampton Roads Connects

## Public Safety

The rate of crime and safety of a community are also major factors influencing the health of the community. According to the *Crime in the United States*, 2016 report, issued by the Federal Bureau of Investigation (FBI), when compared to other cities with comparable populations, Virginia Beach ranked second for the lowest overall crime rate nationwide.

Each year the Virginia Beach Police Department reports to the Virginia Beach Mayor and City Council crime statistics for the city during the prior calendar year. Below summarizes the crime statistics for Virginia Beach in 2018. Both violent and property crimes saw drops of 8.7% and 10.6% respectively, for a total crime reduction of 10.4% in comparison to 2017.

	Actual 2017	Actual 2018	% Change
Homicide	15	18	20.0%
Rape	140	119	-15.0%
Robbery	284	181	-36.3%
Aggravated Assault	249	310	24.5%
<b>Violent</b>	<b>688</b>	<b>628</b>	<b>-8.7%</b>
Burglary	725	547	-24.6%
Larceny	7,692	6,840	-11.1%
Motor Vehicle Theft	427	530	24.1%
Arson	52	40	-23.1%
<b>Property</b>	<b>8,896</b>	<b>7,957</b>	<b>-10.6%</b>
<b>Total</b>	<b>9,584</b>	<b>8,585</b>	<b>-10.4%</b>

Table 4 – 2018 Crime Statistics

Source: Virginia Beach Police Department

At the time of the writing of this report, the complete 2018 annual report from the Virginia Beach Police Department has not been released. As such, the statistics related to crashes shown below is from 2017. The Virginia Beach Police Department reported a 5.9 percent reduction in the total number of reported crashes in Virginia Beach in 2017 as compared to the previous year, as shown in the table below.

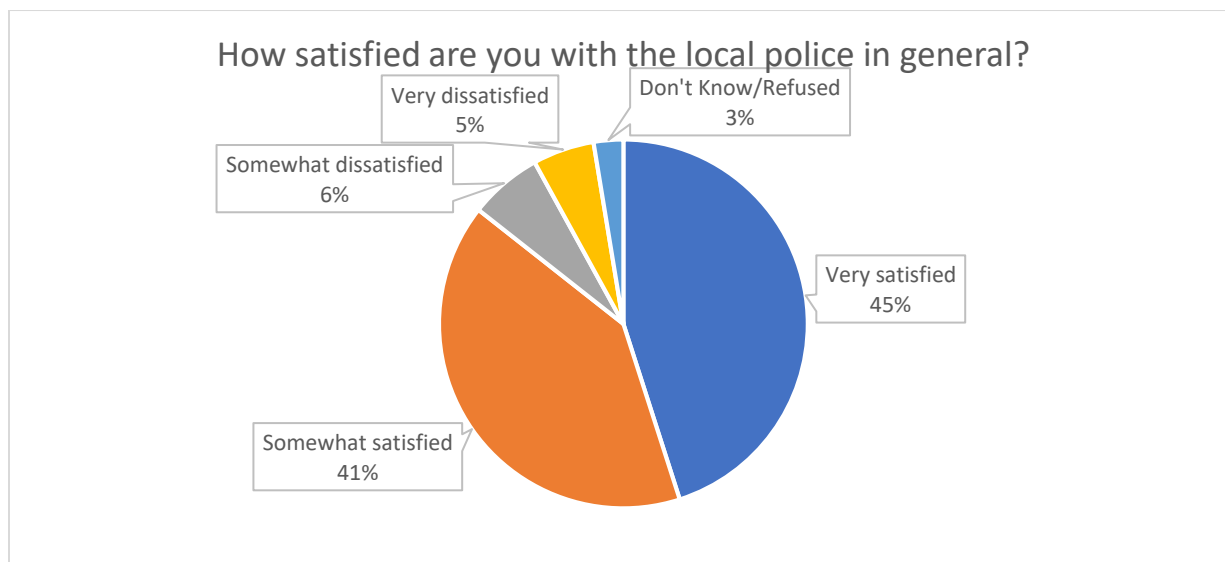
	Number of Crashes
<b>Total Crashes</b>	8,290
<b>Hit and Run Crashes</b>	2,637
<b>Alcohol/Drug Related</b>	421
<b>Fatal Crashes</b>	21
<b>Fatal Crashes in which Seatbelts were not Used</b>	6 of 9
<b>Fatal Crashes Alcohol/Drug Related</b>	9
<b>Fatal Crashes Related to Speed</b>	8

Table 5 – 2017 Crash Data, Virginia Beach

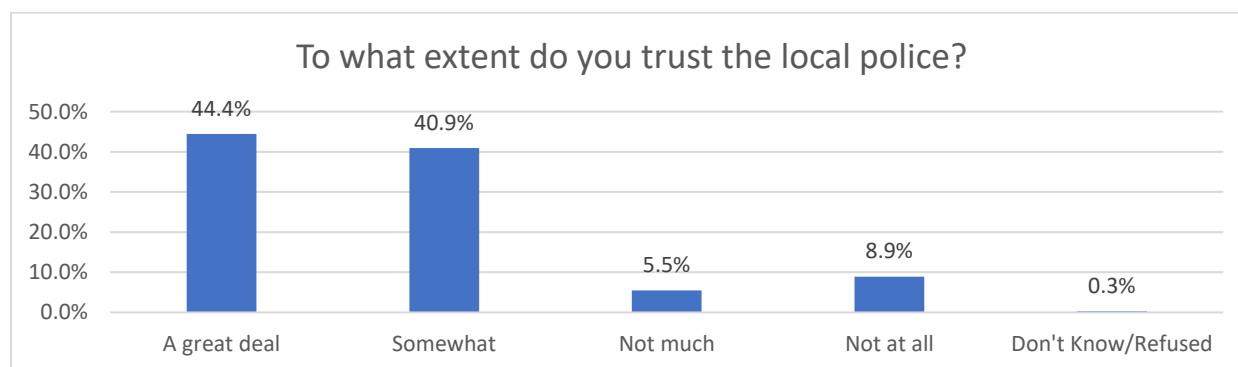
Source: Virginia Beach Police Department, 2017 Report

During 2018, the Virginia Beach Police Department reported 262,374 citizen contacts, 617 of were use of force incidents (0.235%). There were 99 citizen complaints reported (0.038%), and of those complaints only 20 were related to use of force (0.008%).

As Figures 43 and 44 illustrate, most people in Virginia Beach are satisfied and trust the Virginia Beach Police Department.



**Figure 43 Survey Results: “How satisfied are you with the local police?” 2018**  
Source: ODU Life in Hampton Roads Survey, 2018



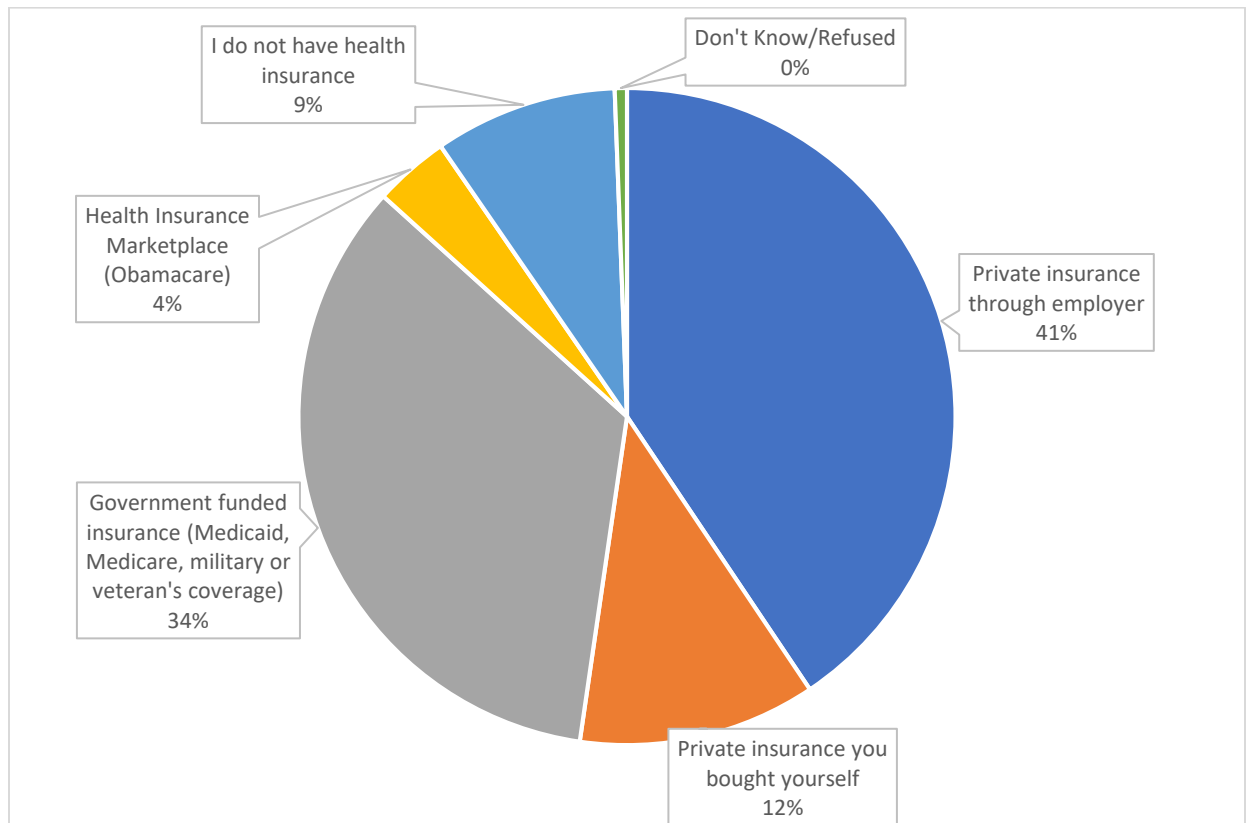
**Figure 44 Survey Results: “To what extent do you trust the local police?” 2018**  
Source: Greater Hampton Roads Connects.

## Health Care Access

Adequate health insurance is primary indicator for health care access and utilization. The Healthy People 2020 goal is that all Americans (100%) have health insurance. In Virginia Beach, there is still some room for improvement, with 9% continuing to report being uninsured. The prevalence of underinsured is another dimension for consideration, though there is no empirical data available for this assessment.

Figure 45 illustrates the breakdown of insurance coverage in Virginia Beach. Only 41% reported having private insurance through an employer, in contrast with the 60% average in the United States for adults

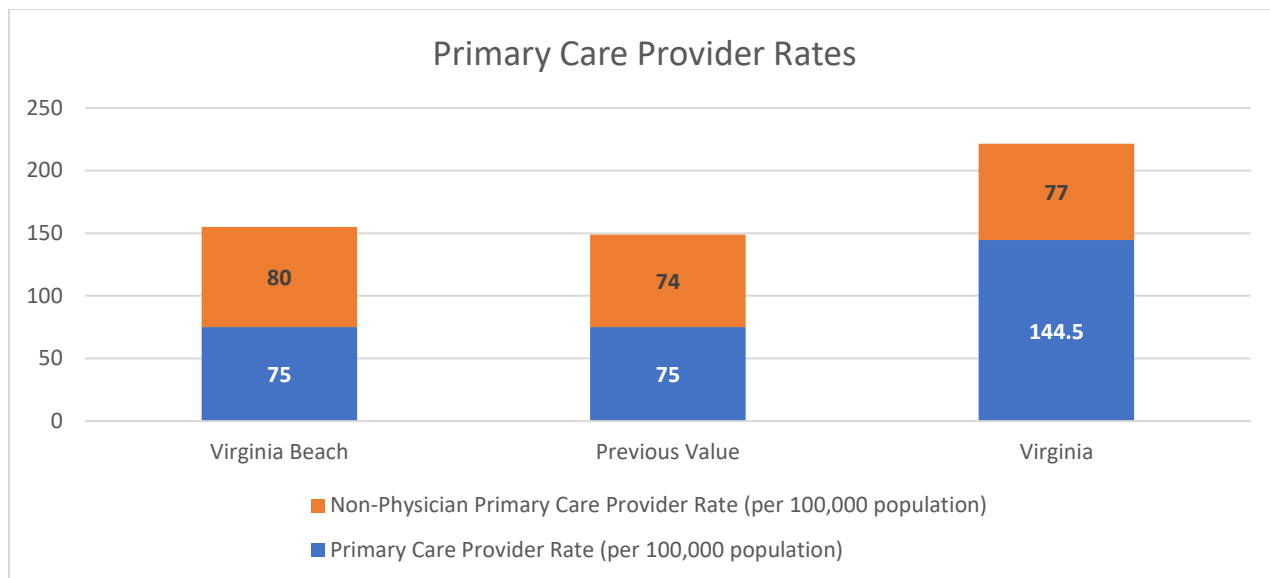
aged 19-64 (KFF, 2018). Those reporting being uninsured were more likely to be male, under the age of 30, non-white, have only a high school education (or less) and make less than \$30,000 per year.



**Figure 45 Survey Results: "Who pays for your primary health insurance?" 2018**

Source: ODU Life in Hampton Roads Survey, 2018

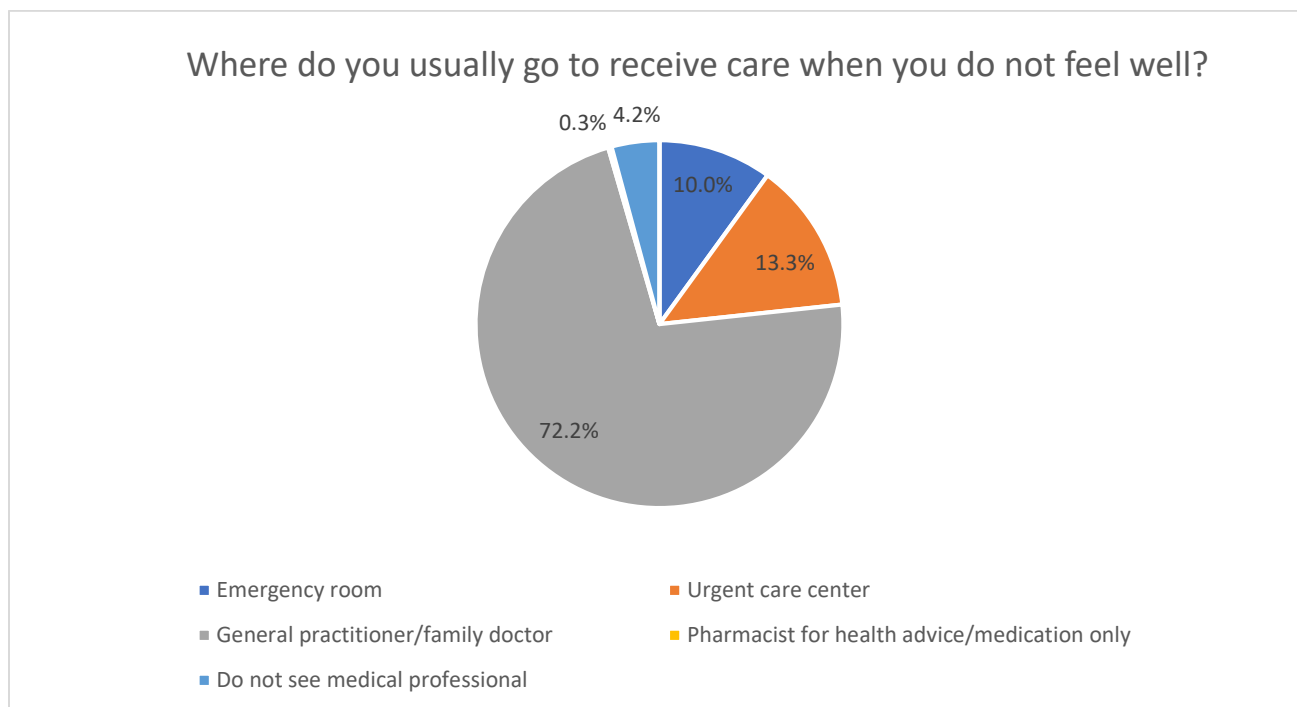
In comparison to the state rate of Primary Care Providers (PCPs) (physician), Virginia Beach has much fewer available PCPs. The rate of Non-Physician PCPs (nurse practitioner and physician assistant) is above the Virginia rate and trending upward from previous reports, an important factor given an apparent shortage of primary care physicians in Virginia Beach. This is depicted in Figure 46, below.



**Figure 46 Primary Care Provider Rate, 2015, and Non-Physician Primary Care Provider Rate, 2017, Virginia Beach, Previous Value, and Virginia**

Source: Greater Hampton Roads Connect

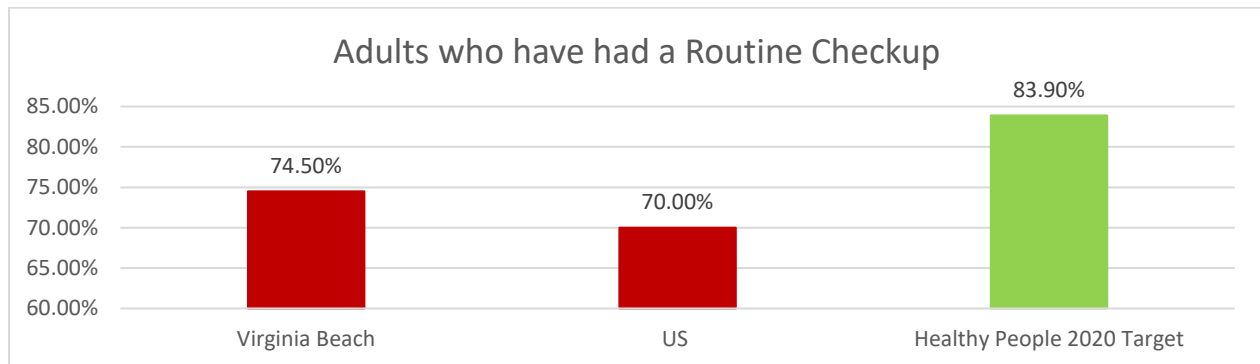
Despite the dearth of primary care physicians in the city, the majority of Virginia Beach residents see a general practitioner or family doctor for their care. Males, under 30, non-white, with a high-school education or less were more likely to utilize the ER than urgent care or general practitioner/family doctor. Respondents with a lower income (less than \$30,000) were less likely to utilize the ER than the other income groups but were significantly more likely not to seek medical care.



**Figure 47 Survey Results: "Where do you usually go to receive care when you do not feel well? 2018**

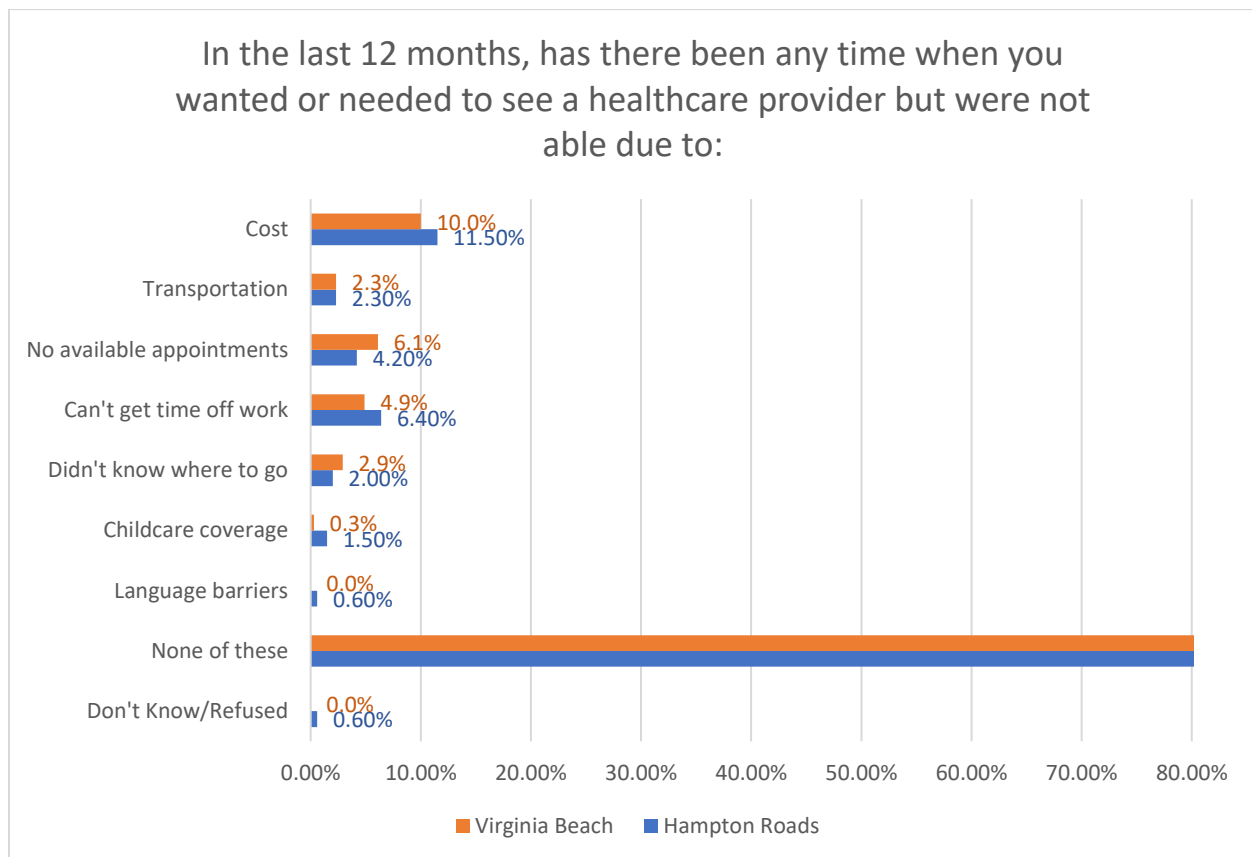
Source: ODU Life in Hampton Roads Survey 2018

As shown in Figure 48 below, the percentage of Virginia Beach adults who have had a routine check up, while above that of the United States, is still significantly lower than the Healthy People 2020 goal.



**Figure 48 Adults who have had a Routine Checkup, 2015**  
Source: Greater Hampton Roads Connects

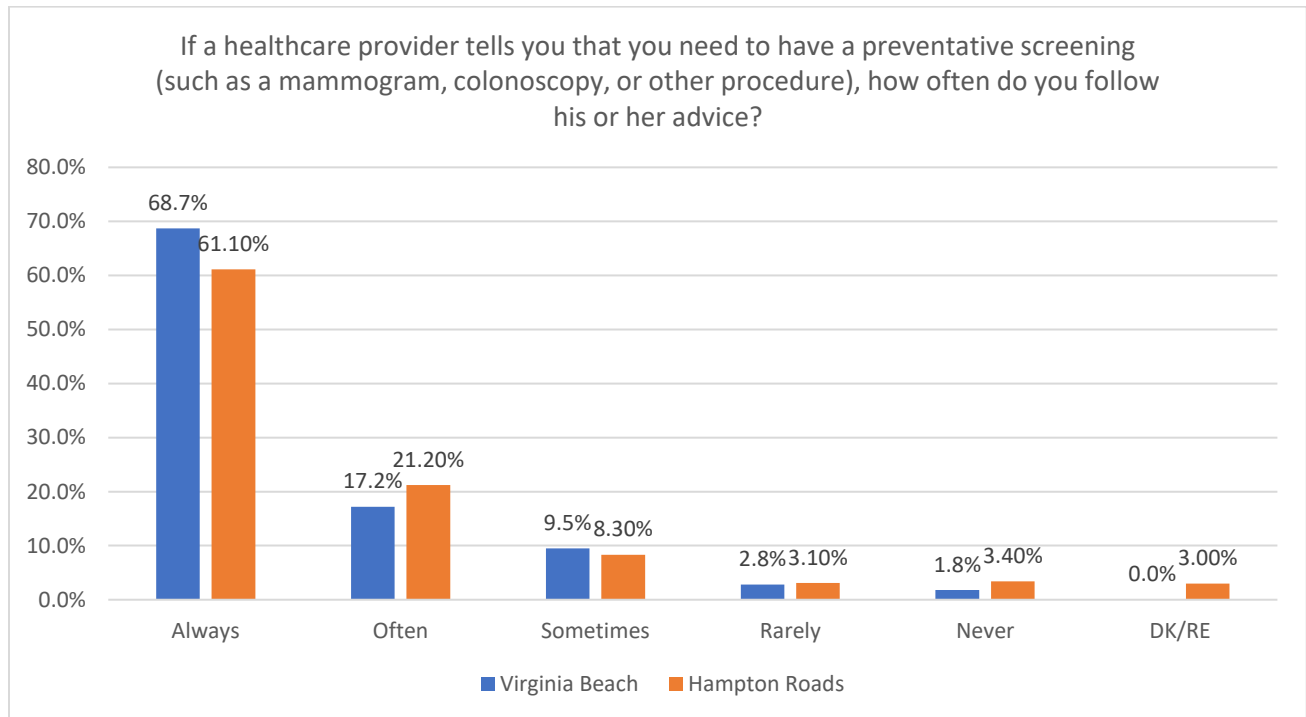
The most common barriers to accessing health care in Virginia Beach were identified as cost and lack of available appointments. The rate of uninsured individuals in Virginia Beach as well as the lower rate of primary care physicians could be contributing factors to these barriers.



**Figure 49 Survey Results: "Has there been any time when you wanted or needed to see a healthcare provider but were not able due to...?"**  
Source: ODU Life in Hampton Roads Survey 2018



Compliance with a provider’s recommendations for a preventive screening is more likely in women than men (72.0% versus 65.3%), in older patients than in younger (77.2% versus 56.2%), in white than non-white patients (70.2% versus 66.6%). Those with a Bachelor’s degree or higher and earning more than \$75,000 per year were the most likely to always follow their provider’s recommendations for preventive care (81.5% and 75.5% respectively).



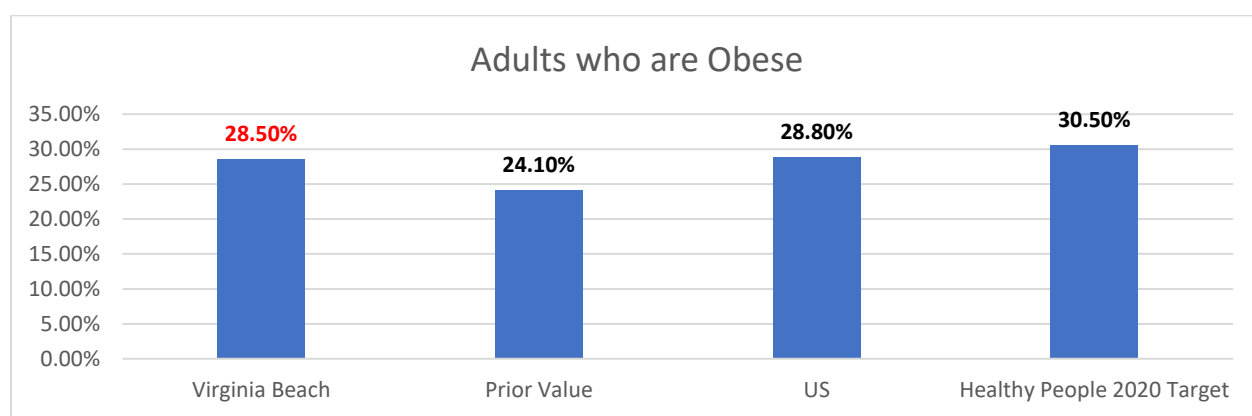
**Figure 50 Survey Results: “If a healthcare provider tells you that you need to have a preventative screening, how often do you follow his or her advice?”**

Source: ODU Life in Hampton Roads Survey 2018

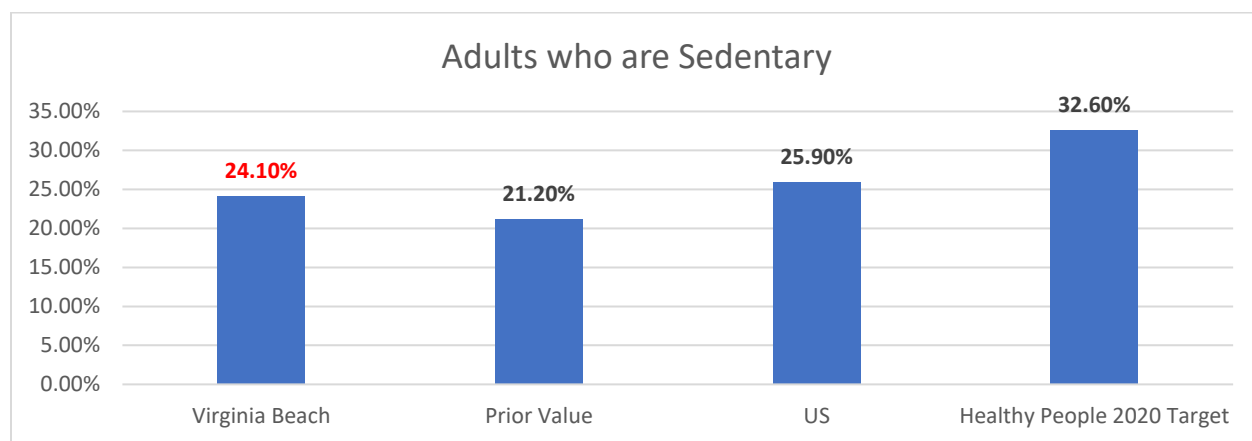
## Health Behaviors

Health behaviors, such as diet and exercise, have powerful impacts on health and well-being. A growing abundance of research shows that maintaining a healthy weight and meeting the minimum recommendations for physical activity each week can dramatically decrease the risk of developing various chronic conditions, can improve stress levels and mental health, and can increase one's life expectancy, and also decrease health care costs.

Despite knowing what ought to be done, Virginia Beach has unfortunately seen an increase in its obesity and sedentary rates among adults since the previous assessment period. Adults who are obese has increased by 4.4% and adults who are sedentary has increased by almost 3%. While both rates have met the Healthy People 2020 goals, it is concerning that the city population has seen an increase in obesity and sedentary behaviors.

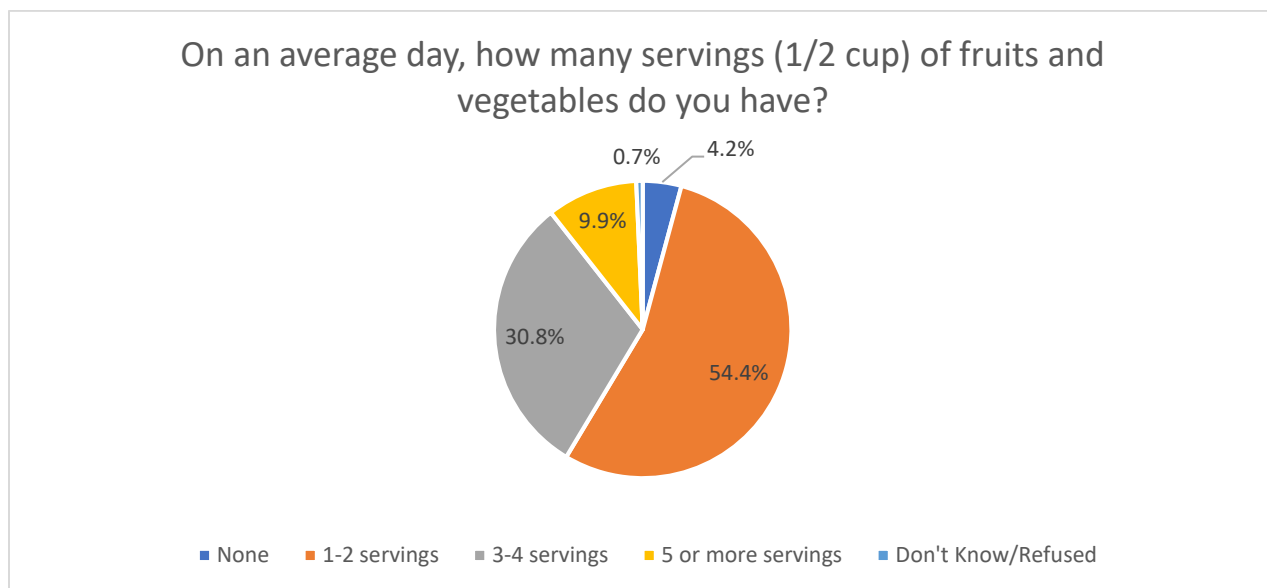


**Figure 51 Adults who are Obese, 2015**  
Source: Greater Hampton Roads Connects



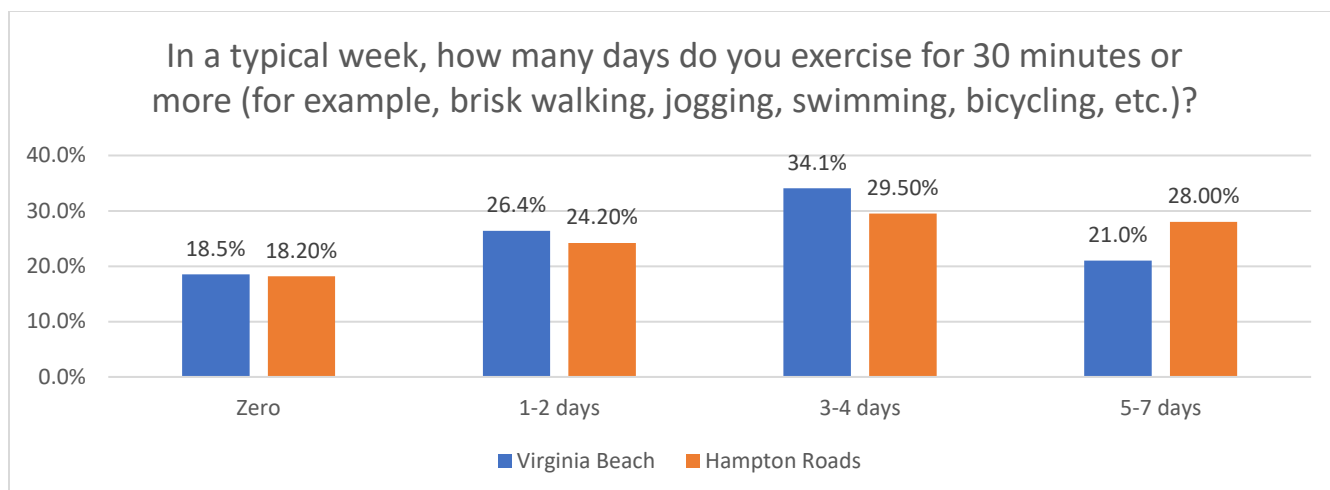
**Figure 52 Adults who are Sedentary, 2015**  
Source: Greater Hampton Roads Connects

As depicted in Figure 53, the vast majority of Virginia Beach residents are eating less than the recommended 5 or more servings of fruits and vegetables per day. Males were more likely to have 0-2 servings than women. Those making more than \$30k but less than \$75K were more likely to have 3+ servings per day.



**Figure 53 Survey Results** “On an average day, how many servings (1/2 cup) of fruits and vegetables do you have?” 2018  
Source: ODU Life in Hampton Roads Survey

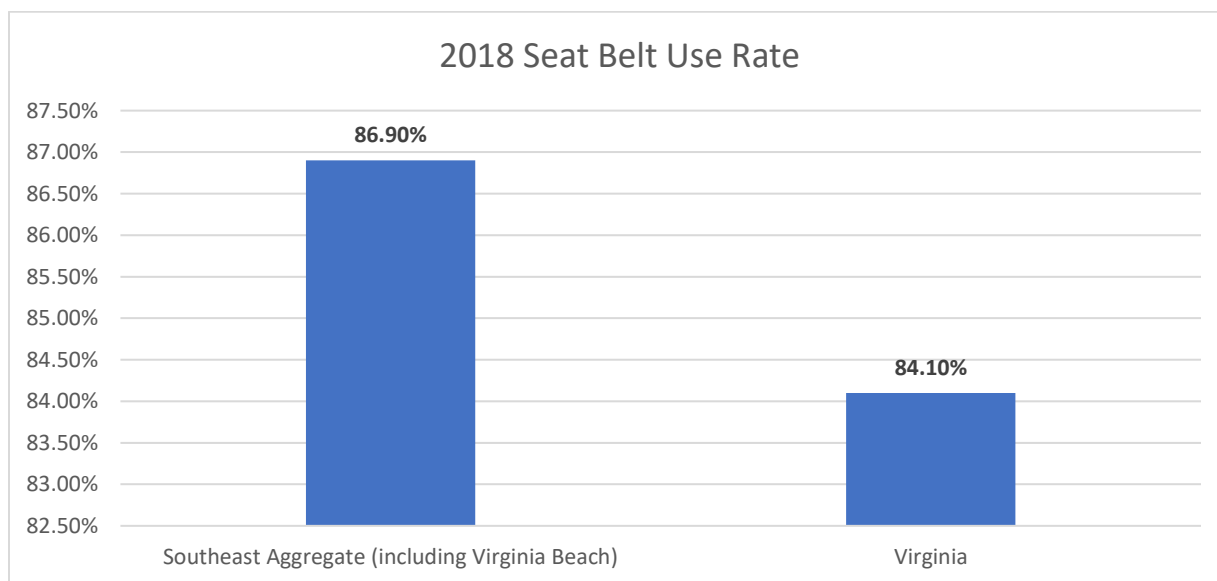
According to the Robert Wood Johnson Foundation Program’s County Health Rankings & Roadmaps Project, Virginia Beach scored 96% in “Access to Exercise Opportunities,” as compared to only 83% across the state (2018). (Please see section entitled “Built Environment” for additional details). Though Virginia Beach is among the state and nation’s highest-ranking municipalities for availability of exercise opportunities, Virginia Beach continues to have a physical inactivity rate of about 22%, according to the County Rankings report (2018).



**Figure 54 Survey Results** "In a typical week, how many days do you exercise for 30 minutes or more?" 2018

Source: ODU Life in Hampton Roads Survey

Seat belt usage is associated with reduced risk of injury or death from passenger vehicle accidents. In Virginia Beach, as the Public Safety crash data above demonstrated, vehicular crashes are all too common. A study sponsored by the Virginia Department of Motor Vehicles' Highway Safety Office found that the highest average of passenger vehicle crash-related fatalities from 2011-2015 was in the Southeast Aggregate counties, including Virginia Beach (2018). This study further evaluated the rate of seat belt usage on roadways throughout the state through an observational study design. Overall, Virginia Beach, as part of the Southeast Aggregate, had a higher rate of seat belt use than the state as a whole.

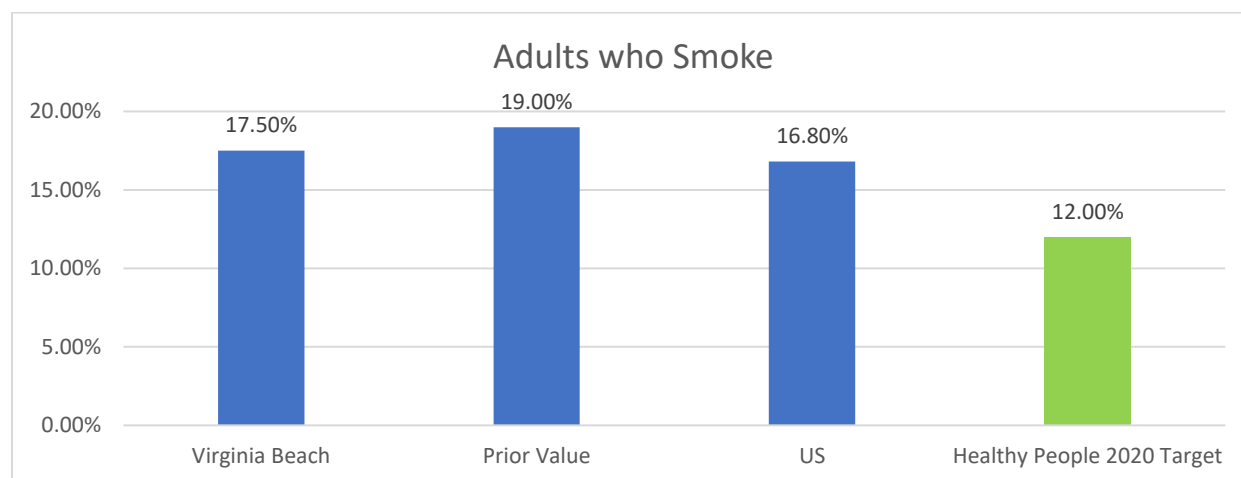


**Figure 55 Seat belt use rate in Southeast Aggregate and Virginia, 2018**

Source: Virginia Department of Motor Vehicles' Highway Safety Office

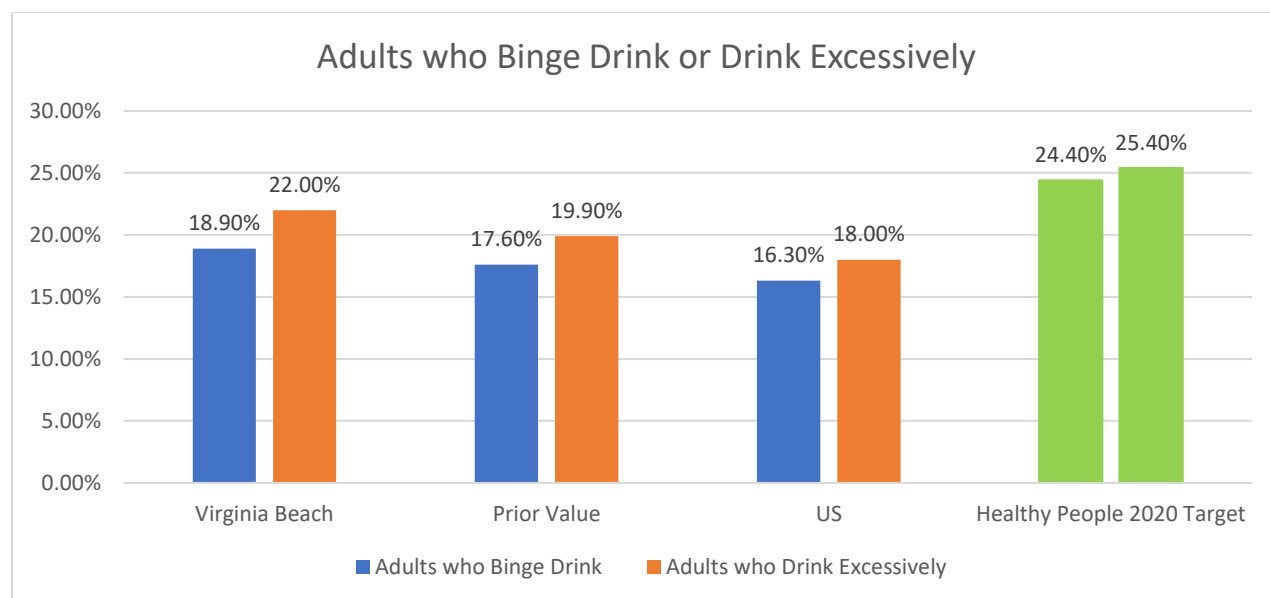
18.4% of adults in Virginia Beach report use of some tobacco products, including cigarettes, cigars, vaping, and smokeless tobacco. Males are almost three times more likely to use tobacco products than

females. Race and ethnicity are not major determinants of tobacco product use with 18.2% of Whites and 18.7% of Non-Whites reporting tobacco product use. Individuals with a Bachelor's degree or higher are almost four times less likely to use tobacco products. As shown in Figure 52, the percentage of adults who smoke in Virginia Beach has not yet reached the Healthy People 2020 goal, though there has been some improvement since the prior measurement.



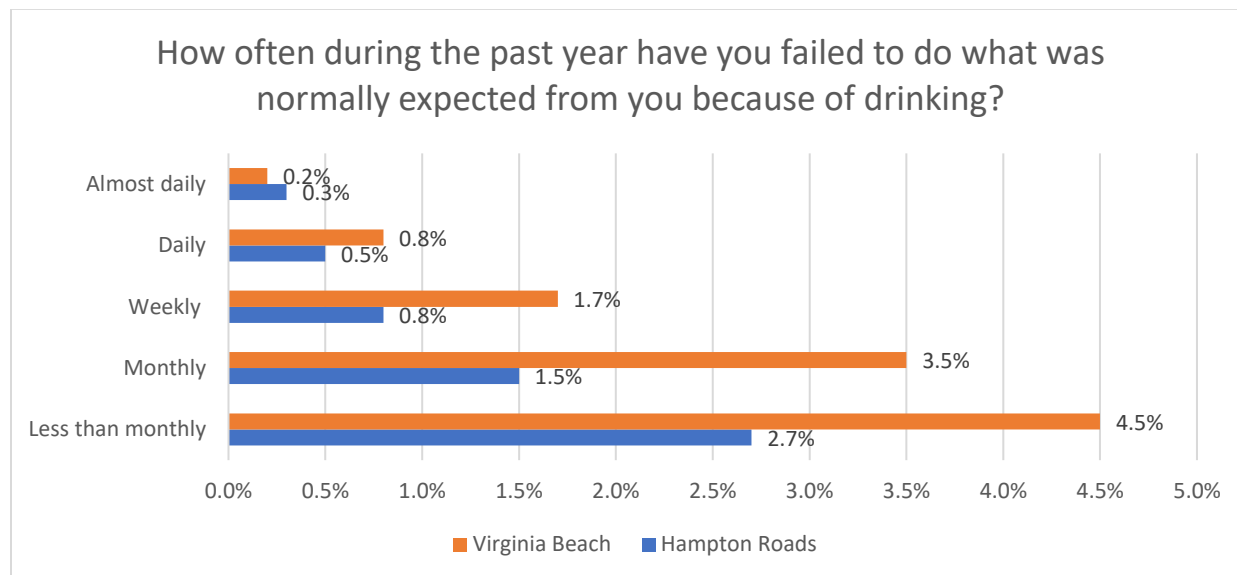
**Figure 56 Adults who Smoke, 2015**  
Source: Greater Hampton Roads Connects

Figure 56 depicts the percentage of adults who binge drink or drink excessively; while the Health People 2020 goals have been met, there has been an increase from the previous measurement for both categories (1.3% binge drinking and 2.1% drinking excessively).



**Figure 57 Adults who Binge Drink or Drink Excessively, 2015, 2016**  
Source: Greater Hampton Roads Connects

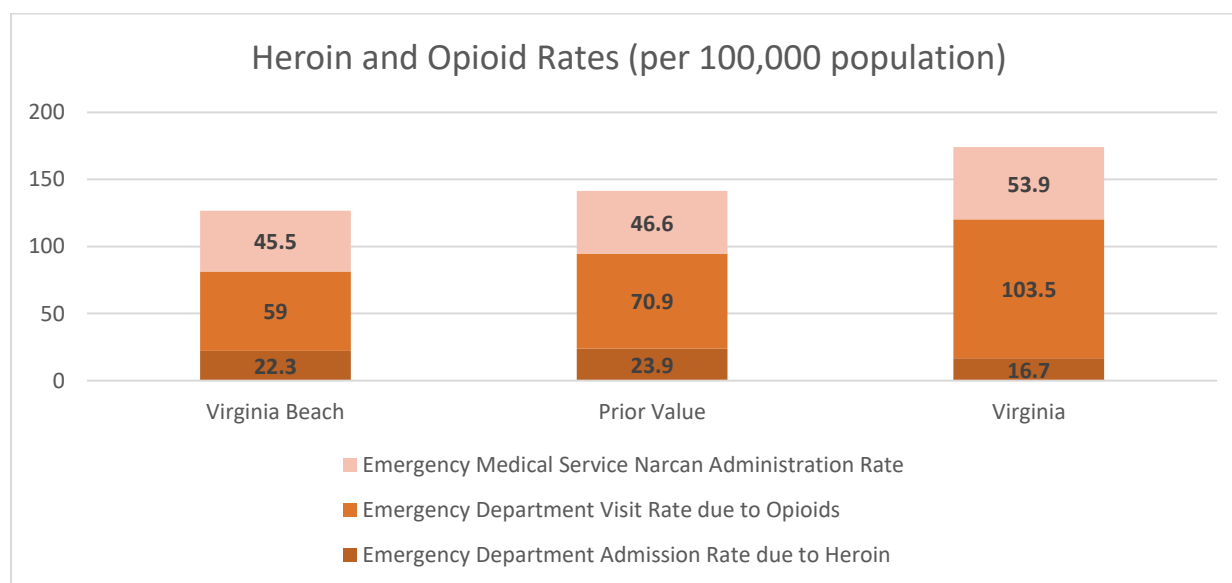
Consistent with the recent increase in binge drinking and drinking excessively are the rates of failing to do what is normally expected because of such drinking, as shown in Figure 57 below. Males are more likely to “fail to do what was normally expected” because of drinking, as are those aged 31-50 years, and whites more than non-whites.



**Figure 58 Survey Results: “How often during the past year have you failed to do what was normally expected from you because of drinking?” 2018**

Source: ODU Life in Hampton Roads Survey

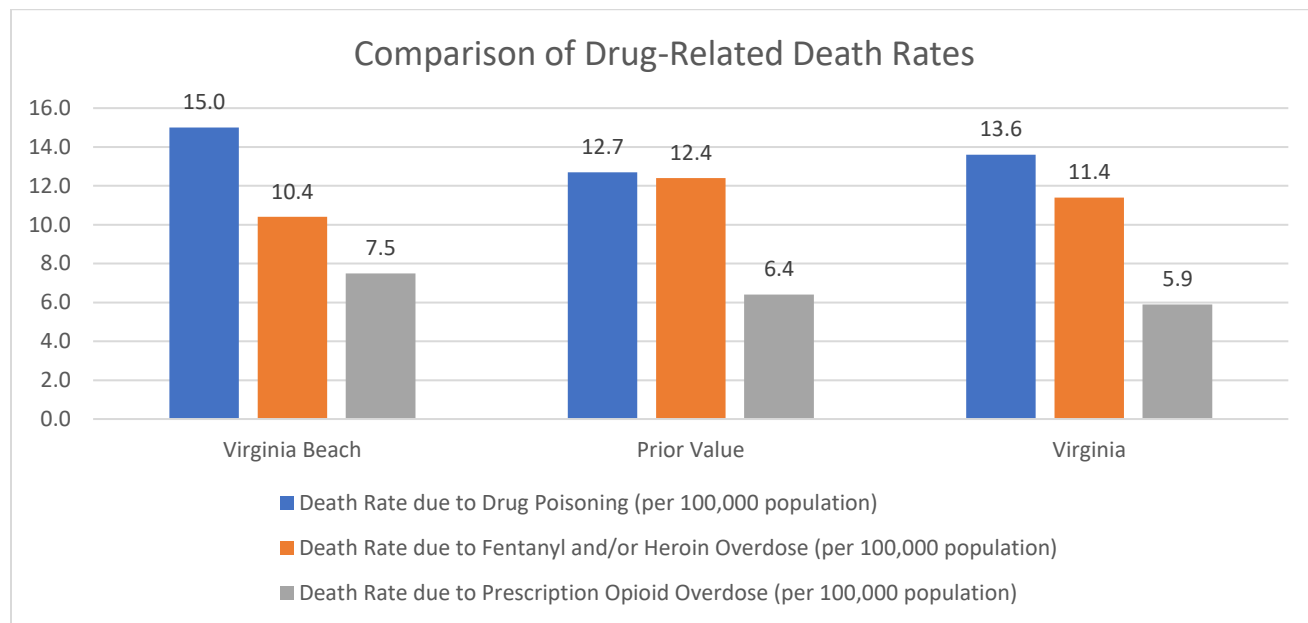
The data presented in Figure 58 provides a snapshot of ED utilization related to heroin and opioids as well as EMS Narcan administration rates. All three rates have decreased in Virginia Beach; the only rate higher in Virginia Beach than Virginia is that of EMS Narcan administration.



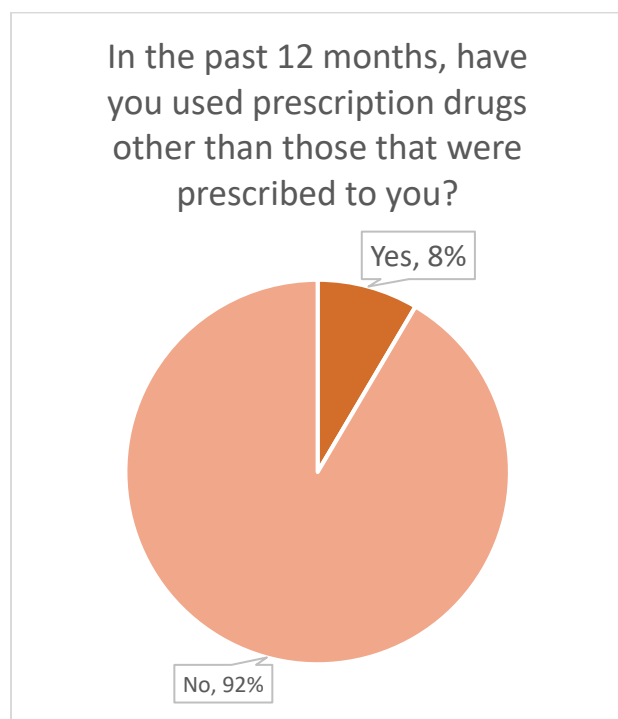
**Figure 59 ED Admission Rate due to Heroin, ED Visit Rate due to Opioids, EMS Narcan Administration Rate, 2017**

Source: Greater Hampton Roads Connects

While these trends in ED utilization are encouraging, Virginia Beach has seen an increase in death rates due to drug poisoning and prescription opioid overdose and a slight drop in death rate due to fentanyl and/or heroin overdose.



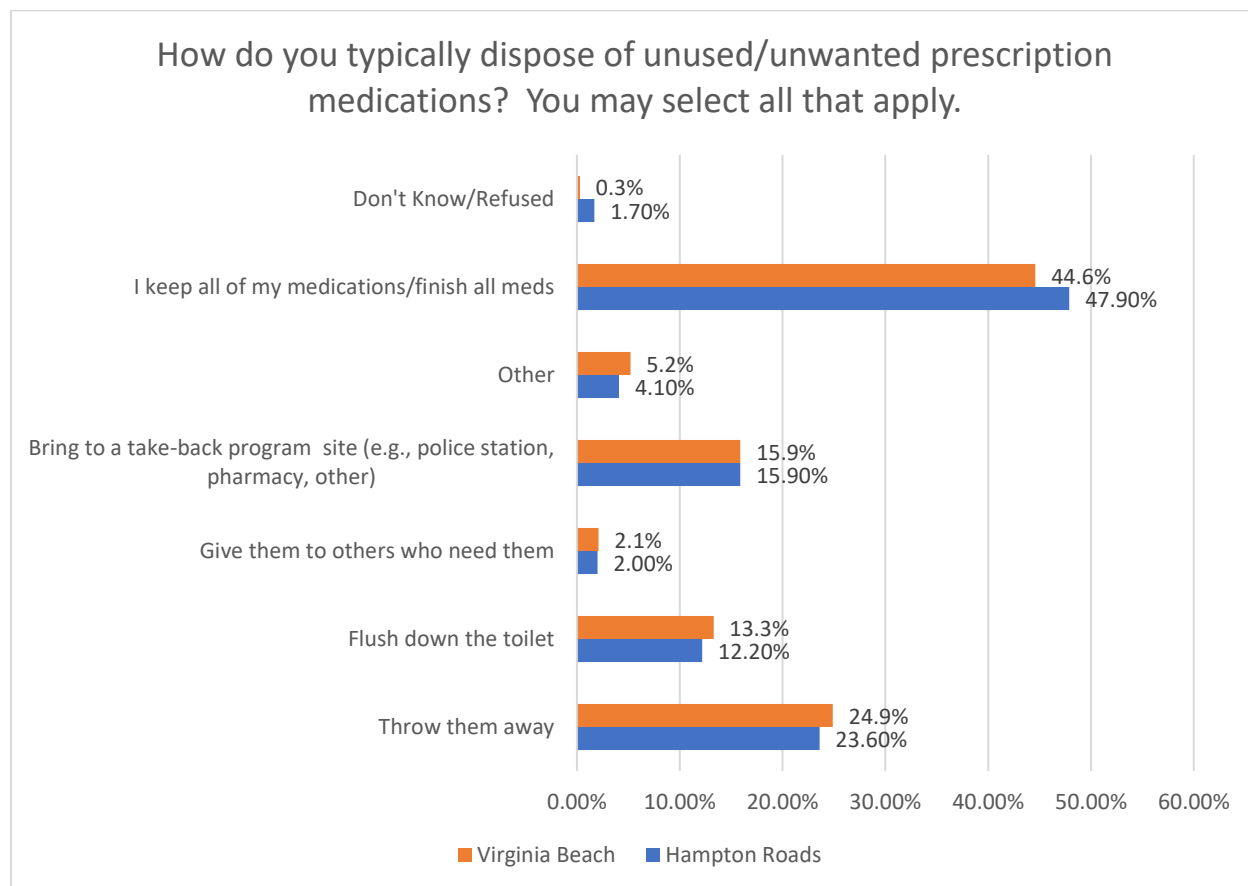
**Figure 60 Comparison of Drug-Related Death Rates, 2014-2016, 2017**  
**Source: Greater Hampton Roads Connects**



According to survey results, about 85 of Virginia Beach residents may have used a prescription drug other than what was prescribed to them. While the data does not detail whether or not these were opioids or other prescriptions, such as anti-depressants, antibiotics, etc., it is concerning that 28,000 or more adult residents in Virginia Beach are using prescription drugs a physician or other provider had not prescribed them.

**Figure 61 Survey Results: “Have you used prescription drugs other than those that were prescribed to you?” 2018**  
Source: ODU Life in Hampton Roads Survey

As Figure 62 below shows, many people do not properly dispose of their medications. Almost 25% of Virginia Beach residents reported throwing their prescription medications away while another 13% flush them down the toilet; 2% reported giving them to others who need them.



**Figure 62 Survey Results: “How do you typically dispose of unused/unwanted prescription medications?” 2018**  
Source: ODU Life in Hampton Roads Survey

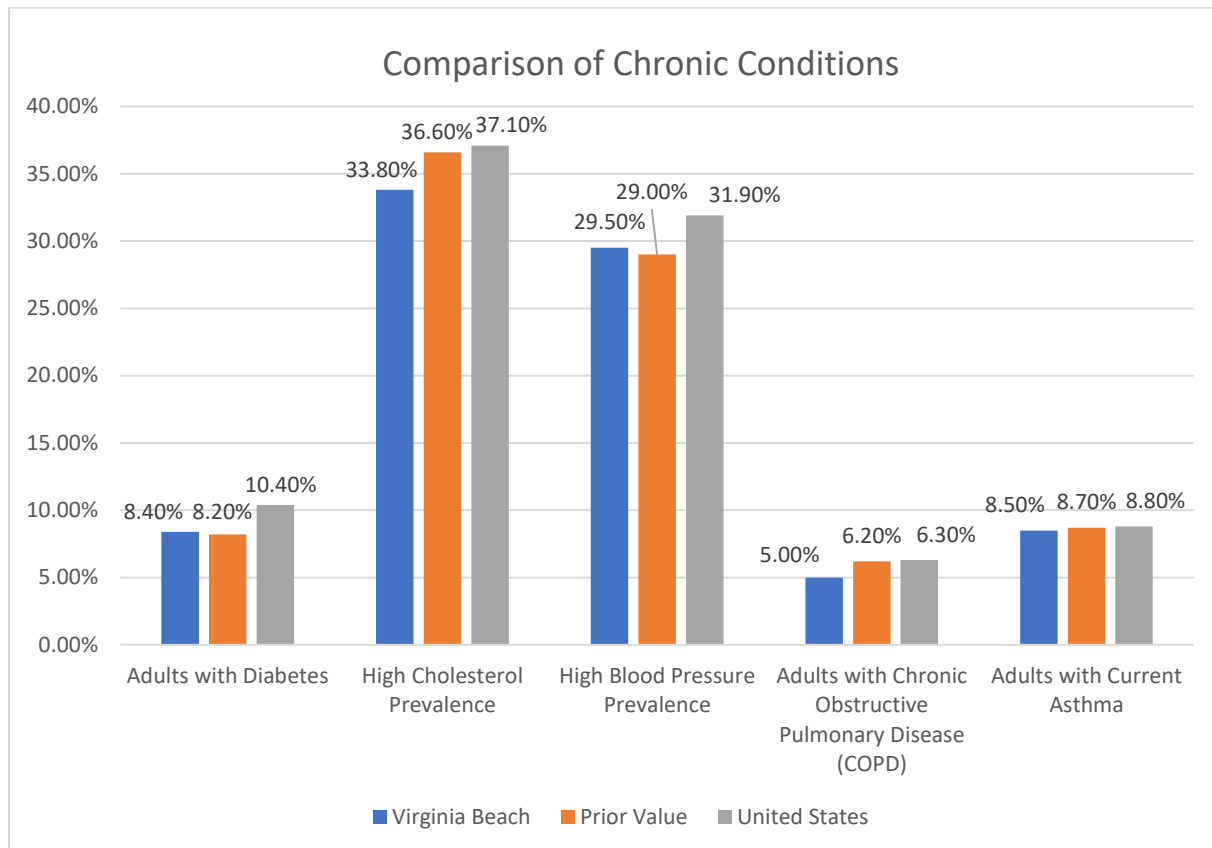
## Chronic Conditions and Cancer

Chronic conditions, often times preventable through proper health behaviors over one’s life, are among the most common cause of morbidity and mortality, as well as major drivers of health care cost. As seen in Figure 63, Virginia Beach is comparatively doing well in terms of the percentage of adult residents with five common chronic conditions, with better rates than what is seen nationally for all five – diabetes, high cholesterol, high blood pressure, chronic obstructive pulmonary disease (COPD), and asthma.

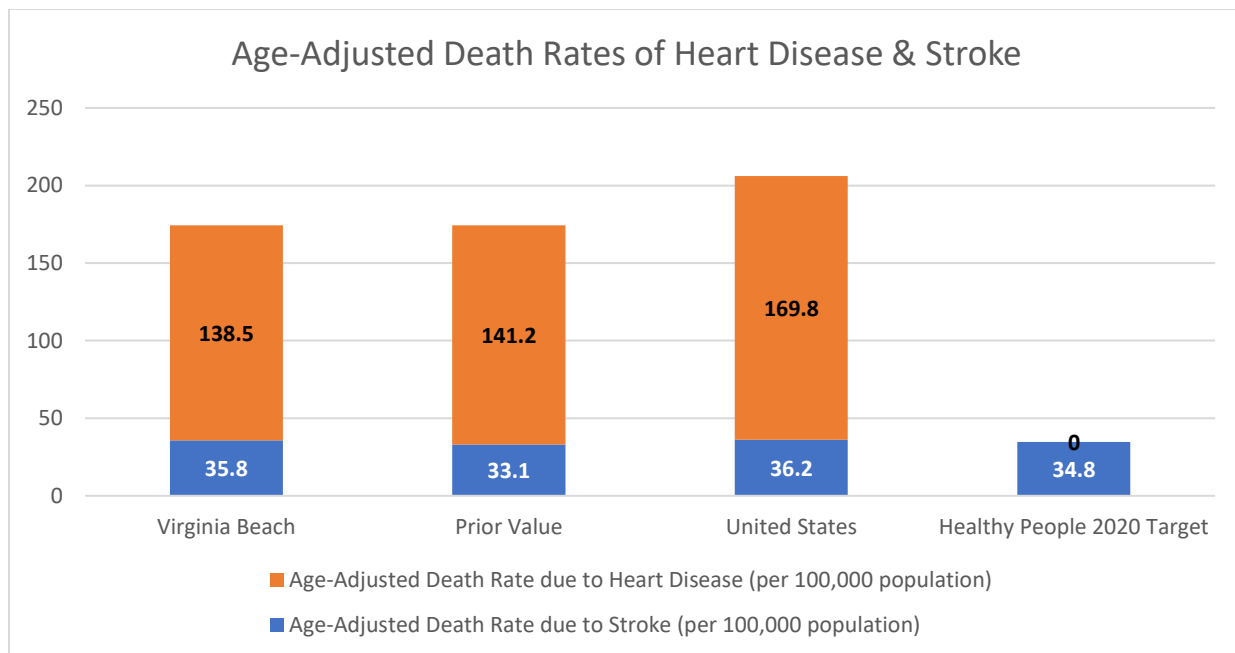
Figure 64 compares the age-adjusted death rates due to heart disease and stroke (both per 100,000 population) in Virginia Beach with that of the United States. In both measures, Virginia Beach is doing



better than the overall United States, though Virginia Beach has not yet reached the Healthy People 2020 goal for age-adjusted death rate due to stroke.



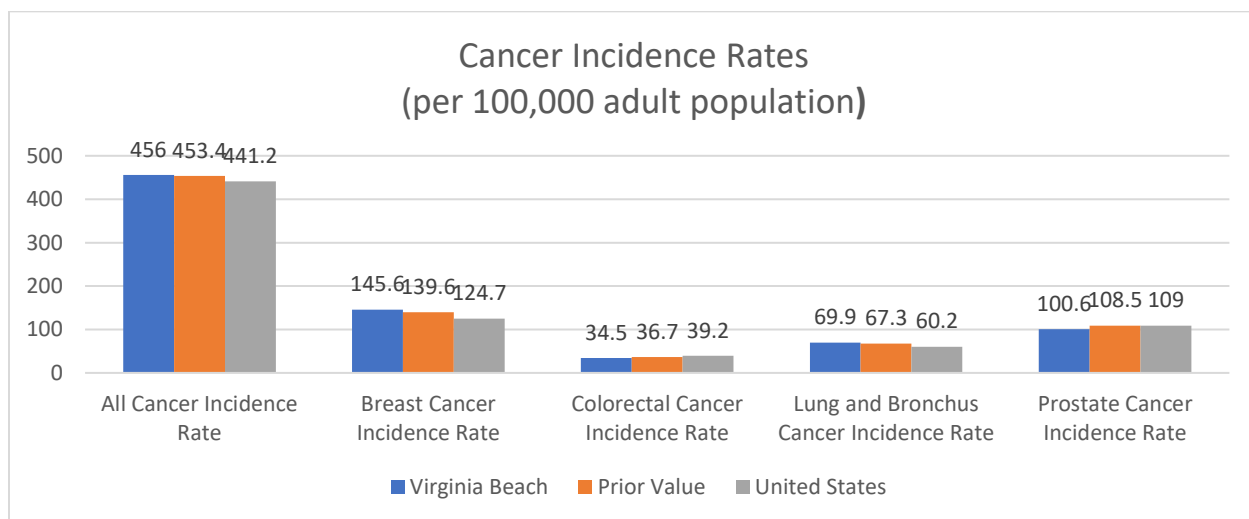
**Figure 63 Comparison of Chronic Conditions – Diabetes, High Cholesterol, High Blood Pressure, COPD, Asthma, 2015**  
Source: Greater Hampton Roads Connects



**Figure 64 Age-Adjusted Death Rates of Heart Disease & Stroke, 2013**

Source: Greater Hampton Roads Connects

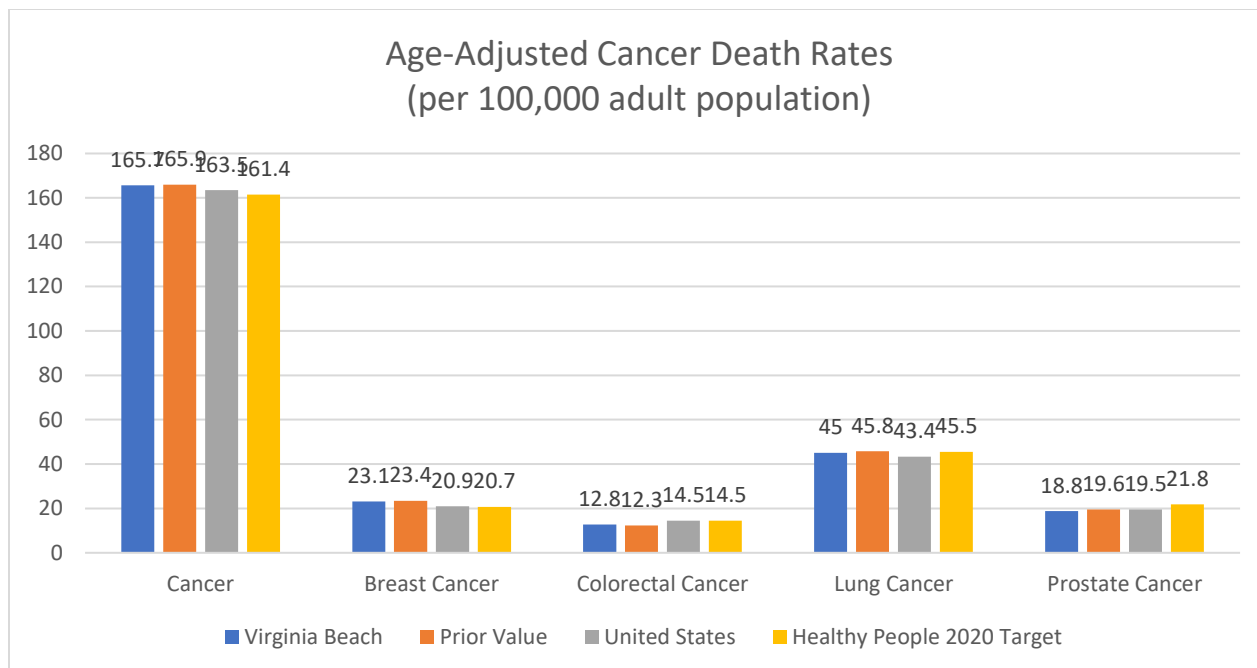
Figure 65 compares the incidence rates (per 100,000 adult population) of all cancer and the four most common types afflicting adults: breast cancer, colorectal cancer, lung and bronchus cancer, and prostate cancer. This data shows that Virginia Beach has a higher incidence rate than Virginia and nationally for all cancer, breast cancer, and lung and bronchus cancer, while a lower rate than both the state and nation for colorectal cancer and prostate cancer.



**Figure 65 Cancer Incidence Rates (per 100,000 population): All Cancer, Breast Cancer, Colorectal Cancer, Lung Cancer, Prostate Cancer, 2011-2015**

Source: Greater Hampton Roads Connects

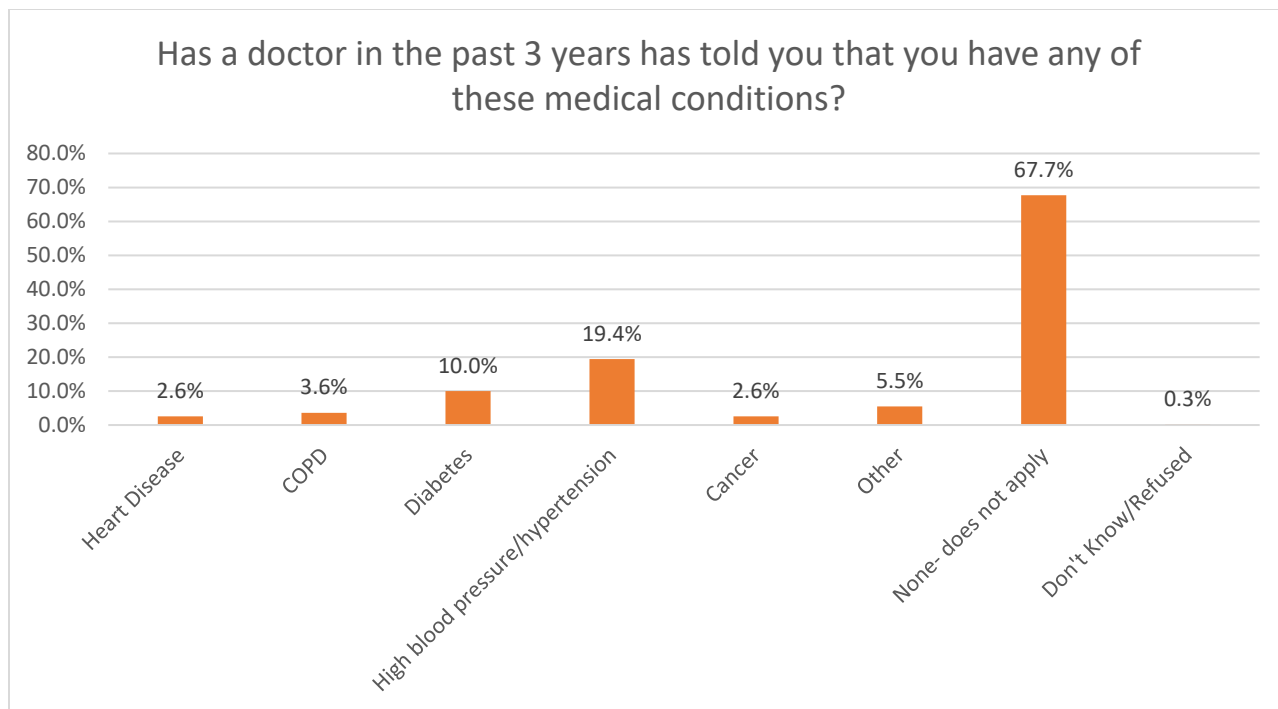
Figure 66 depicts the age-adjusted cancer death rates and includes the Healthy People 2020 goals for each category. Virginia Beach has met the HP2020 goals for colorectal cancer and prostate cancer.



**Figure 66 Age-Adjusted Cancer Death Rates (per 100,000 population): Cancer, Breast Cancer, Colorectal Cancer, Lung Cancer, Prostate Cancer, 2011-2015**

Source: Greater Hampton Roads Connects

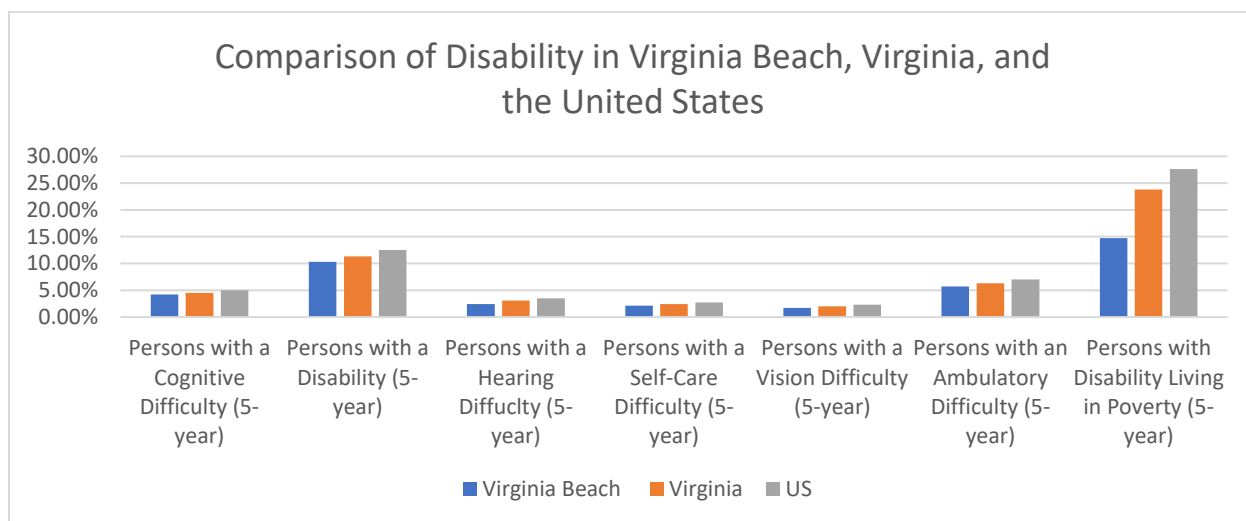
Male respondents were more likely to report having COPD and diabetes, whereas female respondents were more likely to report having heart disease and cancer. Not surprisingly, individuals aged 51+ were more likely to report having at least one chronic condition diagnosis. Non-white respondents had higher reported rates of COPD, diabetes, and high blood pressure than white respondents. Respondents reporting high school education only had the highest rates for all specified conditions except heart disease; respondents with higher incomes were more likely to report not having any of these chronic conditions.



**Figure 67 Survey Results: “Has a doctor in the past 3 years has told you that you have any of these medical conditions?” 2018**  
**Source: ODU Life in Hampton Roads Survey**

## Disabilities

When compared to Virginia and the United States, Virginia Beach consistently has lower rates of disability across all measures evaluated. Consistent with state and national trends, however, those persons in Virginia Beach with disability are more likely to live in poverty than non-disabled individuals.

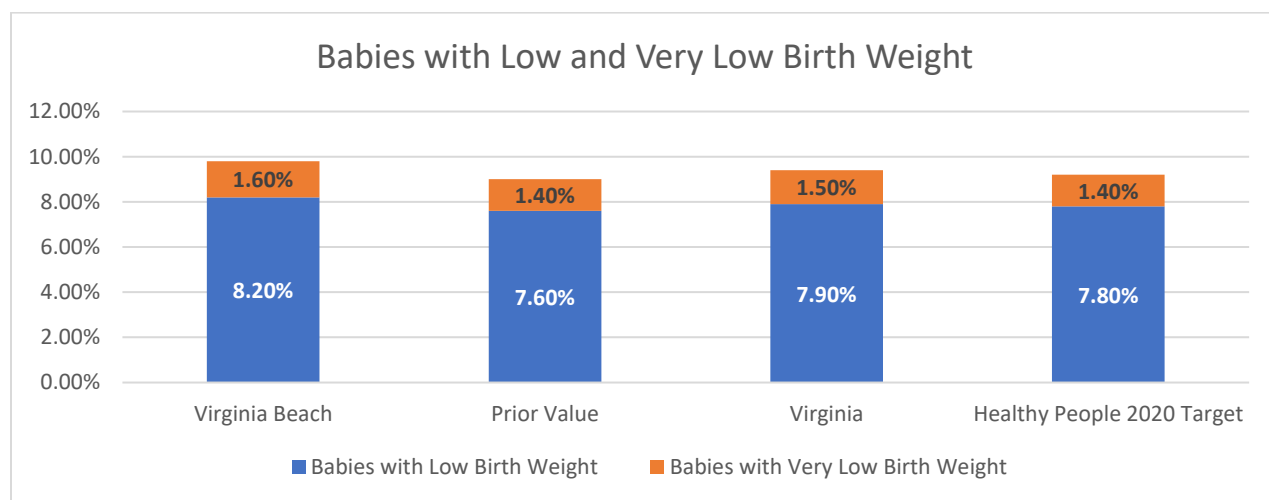


**Figure 68 Comparison of Disability in Virginia Beach, Virginia, and United States, 2012-2016**  
**Source: Greater Hampton Roads Connects**

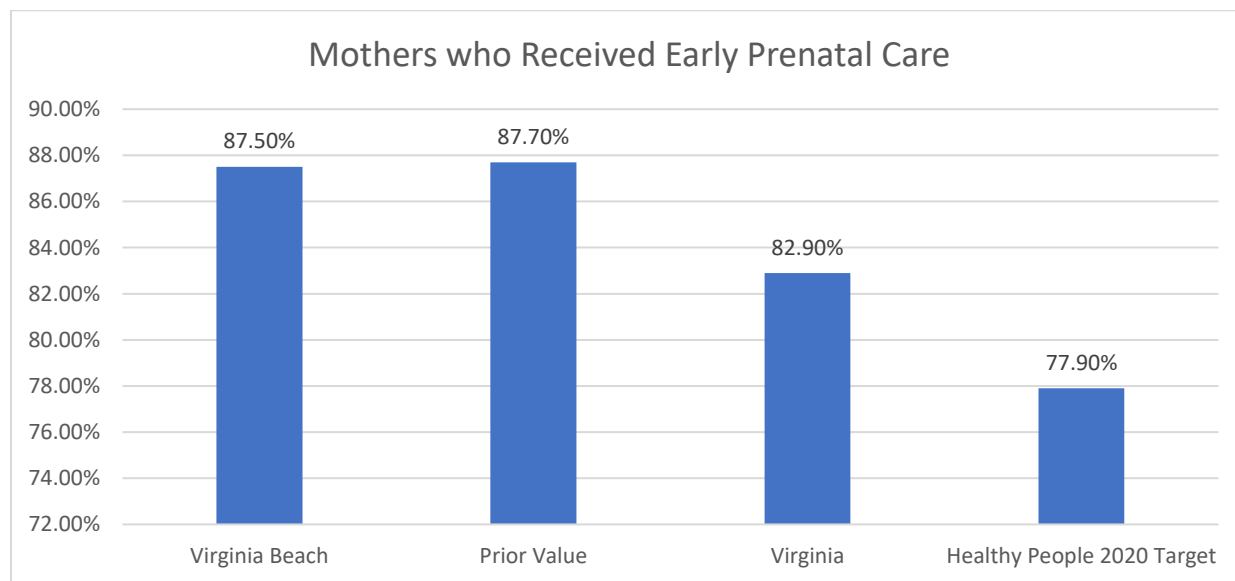
According to the U.S. Census Bureau, 17.50% of veterans in Virginia Beach have a disability, as opposed to the overall population rate of 10.30%. To see details of veterans with service-related disability, please see Figure 13 (page 11).

## Infant and Maternal Health

As Figure 68 depicts, Virginia Beach has higher rates of low and very low birth weight than the state and the Healthy People 2020 goals. This is despite, as Figure 69 shows, Virginia Beach having better rates of mothers who received early prenatal care.

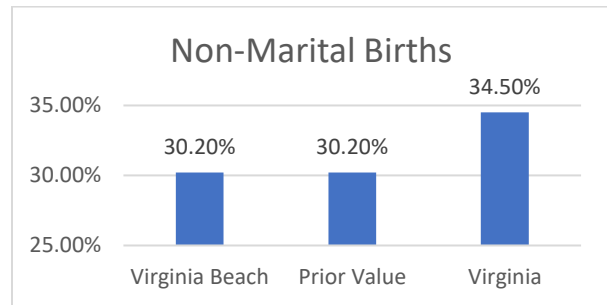


**Figure 69 Babies with Low and Very Low Birth Weight, 2016**  
Source: Greater Hampton Roads Connects

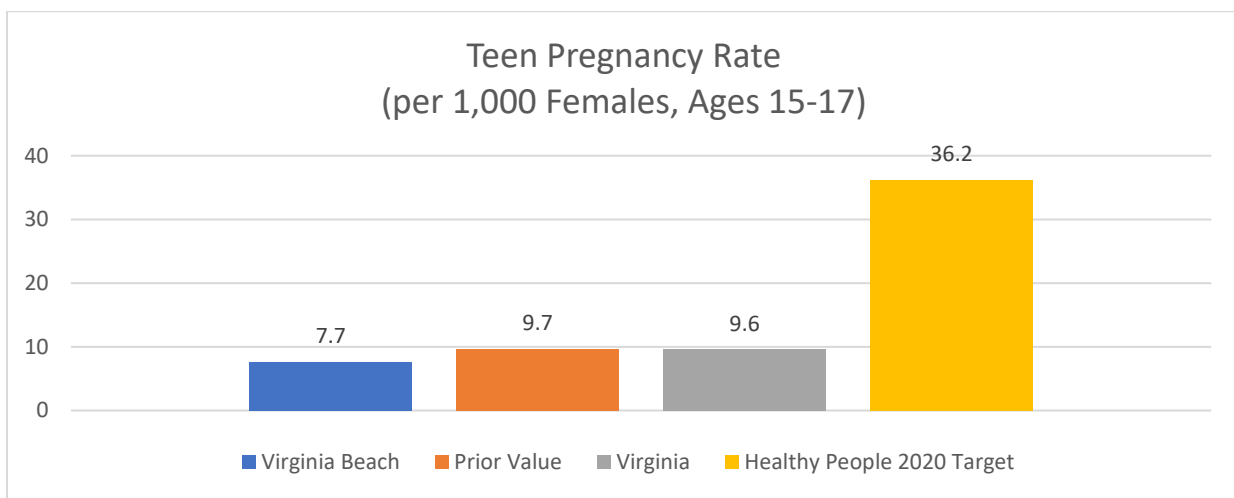


**Figure 70 Mothers who Received Early Prenatal Care, 2013**  
Source: Greater Hampton Roads Connects

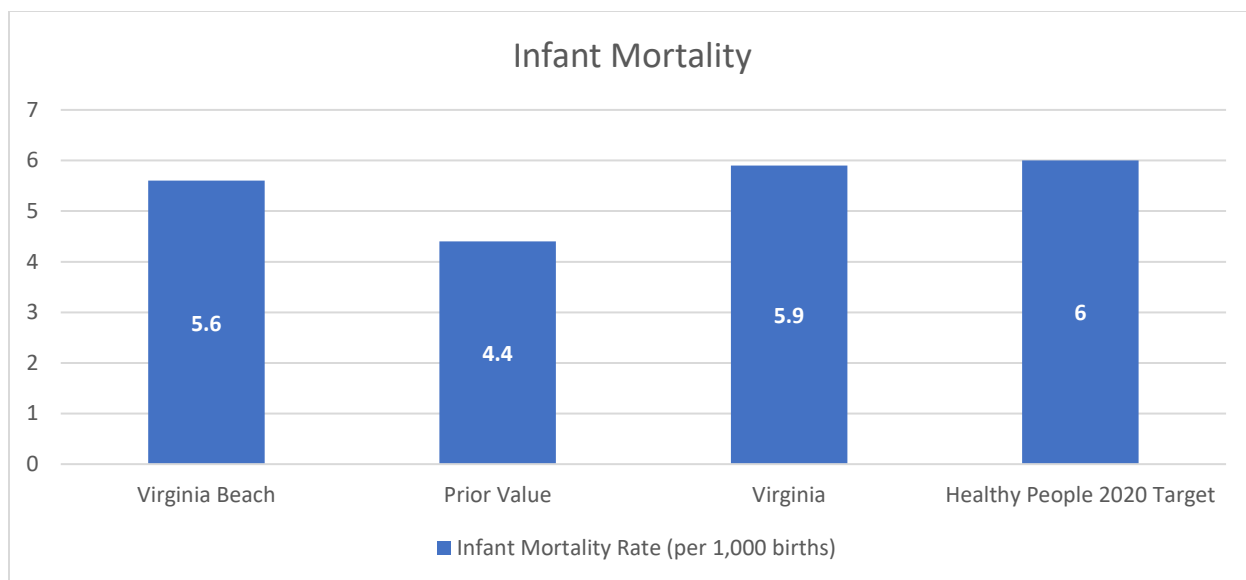
Non-marital births remain consistently lower in Virginia Beach than throughout the state, as shown in Figure 70 on the right. Also lower than the state rate, and much lower than the Healthy People 2020 goal, teen pregnancy rate among females ages 15-17 continues to improve in Virginia Beach, as Figure 71 illustrates.



**Figure 71 Non-Marital Births, Virginia Beach & Virginia, 2016**  
Source: Greater Hampton Roads Connects

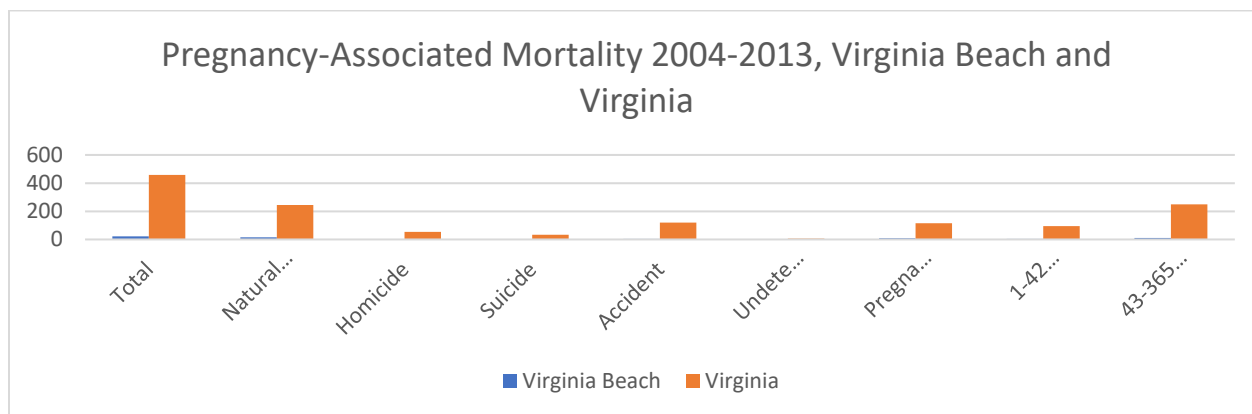


**Figure 72 Teen Pregnancy Rate (per 1,000 Females, Ages 15-17), 2016**  
Source: Greater Hampton Roads Connects



**Figure 73 Infant Mortality Rate, 2016**  
**Source: Greater Hampton Roads Connects**

In Virginia, maternal mortality data is monitored by looking at pregnancy-associated deaths. A pregnancy-associated is defined as the death of a woman while pregnant or within one year of pregnancy, regardless of the outcome of the pregnancy or the cause of death, according to the Office of the Chief Medical Examiner, Virginia Department of Health. In Virginia, pregnancy-associated deaths are identified by the Division of Health Statistics and then reviewed by the Maternal Mortality Review Team at the Virginia Department of Health. There are three methods of identification: through examination of ICD-9 cause of death codes in the “pregnancy, childbirth and the puerperium” categories; through matching birth or fetal death certificates with maternal death certificate information; and through review of Virginia death certificates which indicate the decedent was pregnant within three months of death. Pregnancy-associated deaths data is presented below in Figure 73.



**Figure 74 Pregnancy-Associated Mortality, 2004-2013, Virginia Beach and Virginia**  
**Source: Office of Chief Medical Examiner, Virginia Department of Health**

Unfortunately, the methods for documenting the cause of death are not consistent city to city or state to state so it is challenging and potentially erroneous to compare maternal mortality rates based on current dichotomy in methodologies to capture the data, as well as differences in definition. For example, the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) use different definitions for evaluating maternal mortality than the pregnancy-associated deaths method currently used in Virginia; the CDC uses pregnancy-related deaths which is comparable to Virginia's definition but which excludes accidental or incidental death causes which are included in Virginia's definition; the WHO uses the maternal mortality ratio which is defined as "maternal death is the live death of a woman while pregnant within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not accidental or incidental deaths."

## Sexually Transmitted Infections

As shown in Figure 73, since the last measurement period in which the prior value was captured (2015), there have been some concerning trends emerging. The incidence rate of Hepatitis C has increased almost 14%; the incidence rate for Gonorrhea shows more than a 23% increase; and Chlamydia incidence rate has grown up over 22%.

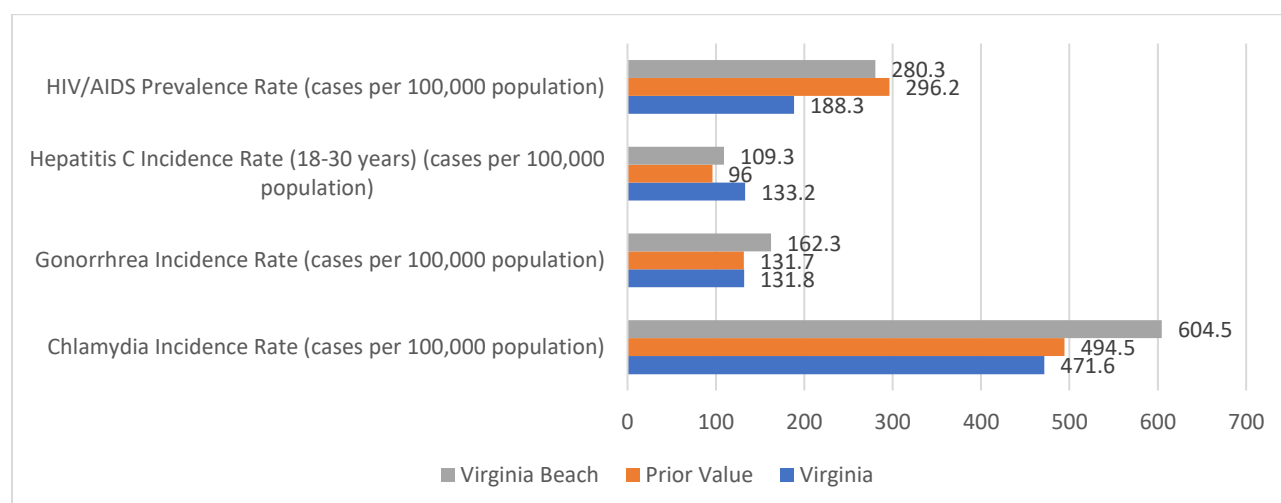


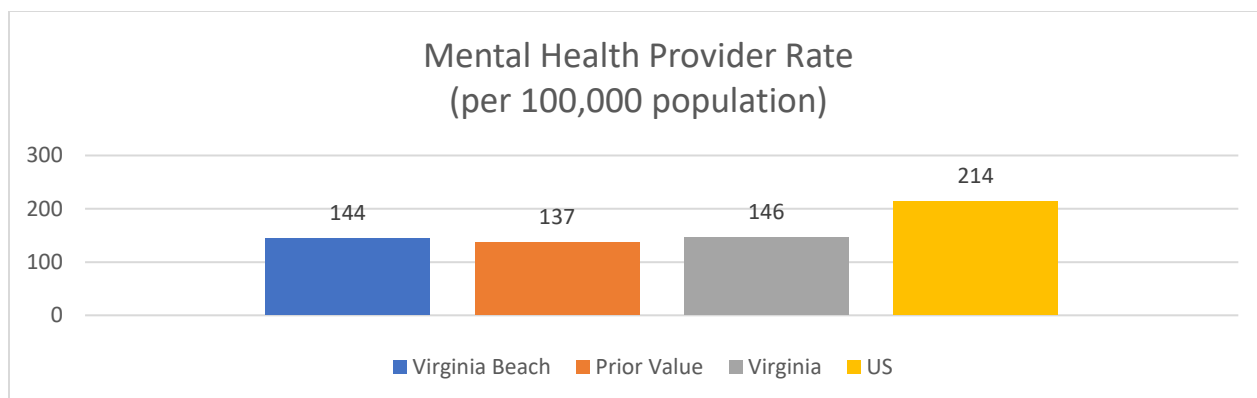
Figure 75 Prevalence and Incidence Rates of Common STIs, 2016

Source: Greater Hampton Roads Connects

## Mental Health

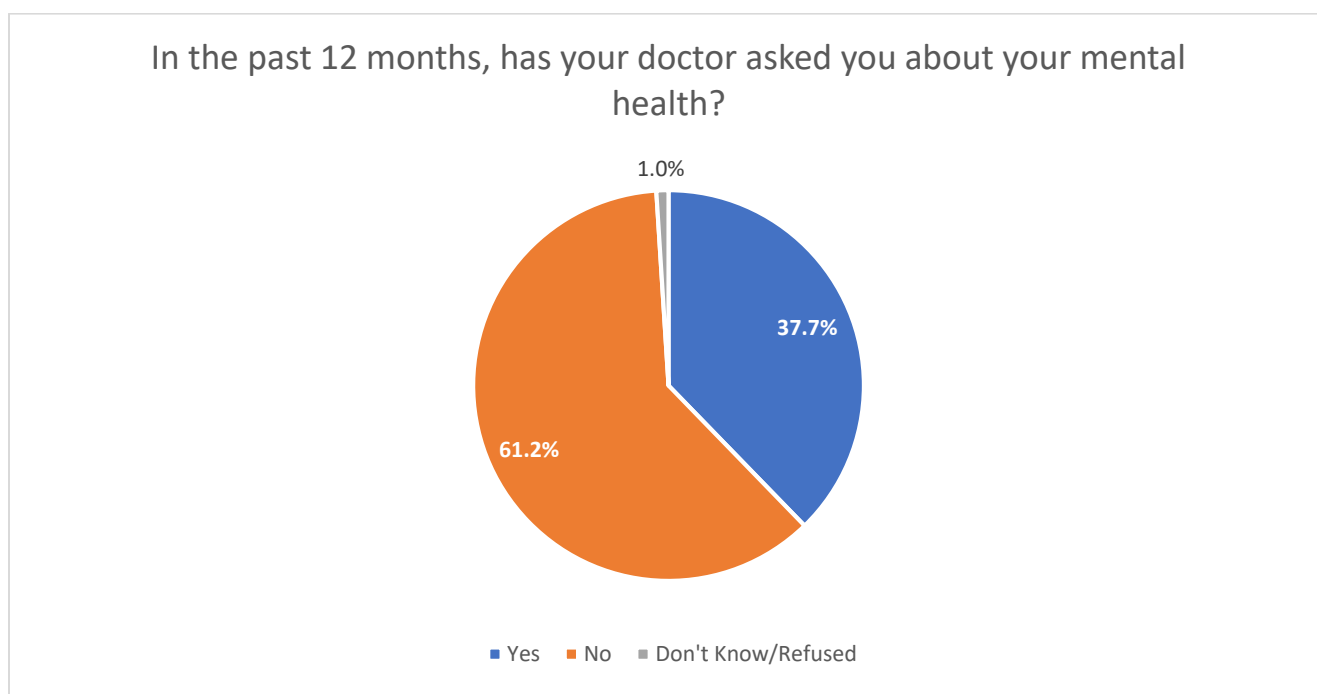
Availability of providers is a critical factor in patient access and appropriate utilization. Mental health provider availability is a concern for Virginia Beach as the rate of mental health providers is less than the state rate and significantly less than the national rate per 100,000 population. While the availability of mental health providers in Virginia Beach has improved since the previous measurement, the city is still at only 67% of the national average availability in the United States.





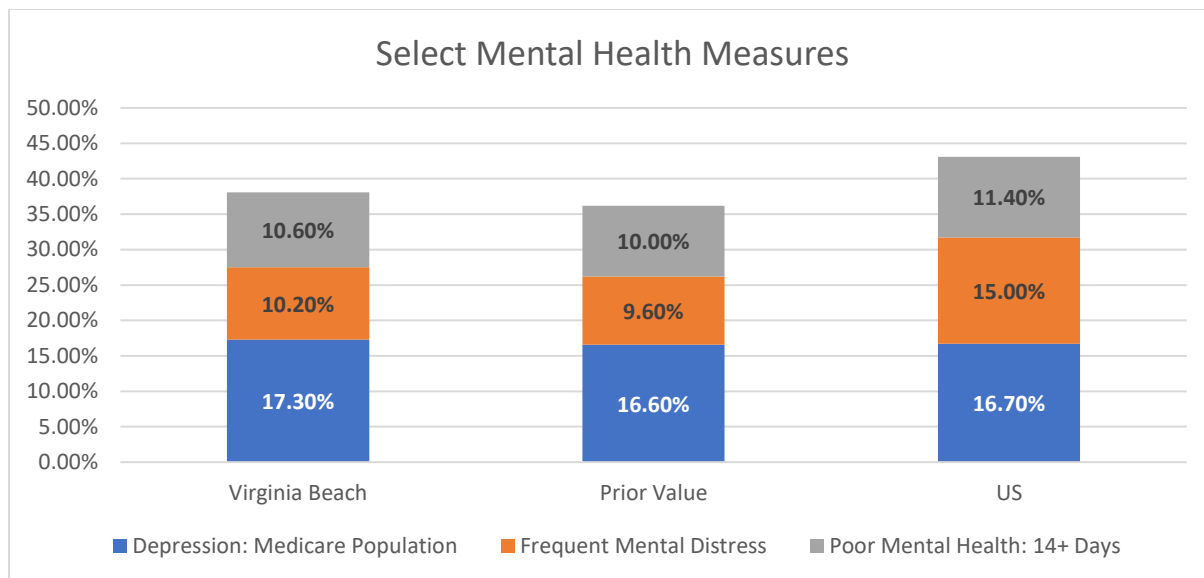
**Figure 76 Mental Health Provider Rate, 2017**  
Source: Greater Hampton Roads Connects

Despite the importance of mental health in assuring full health of the whole person, the majority of Virginia Beach residents are unlikely to be asked by their doctor about their mental health (61.2%), as shown in Figure 77. Female residents and those under the age of 30 years were more likely to report that a doctor had inquired about their mental health, 47.1% and 51. % respectively.



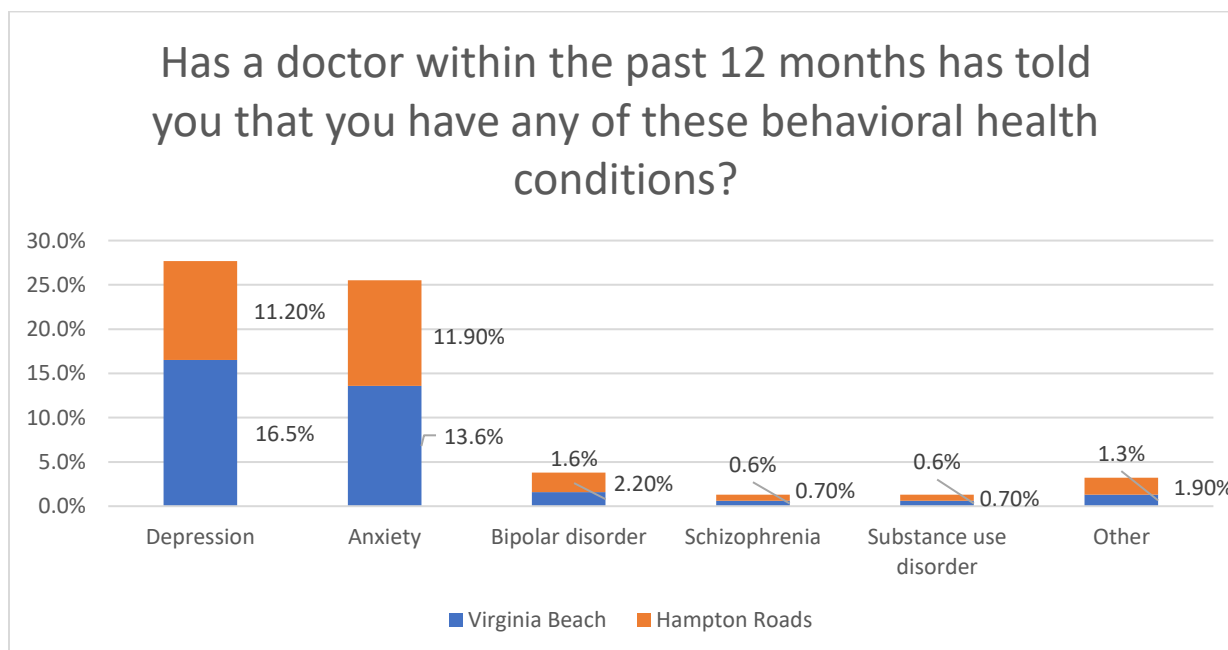
**Figure 77 Survey Results: "In the past 12 months, has your doctor asked you about your mental health?" 2018**  
Source: ODU Life in Hampton Roads Survey

Figure 78 below compares several mental health measures in Virginia Beach current, Virginia Beach prior value, and current US values. Depression among the Medicare population is higher in Virginia Beach whereas frequent mental distress and having poor mental health for greater than 14 days was lower in Virginia Beach than nationally.



**Figure 78 Select Mental Health Measures: Depression, Medicare Population, 2015; Frequent Mental Distress, 2016; Poor Mental Health: 14+ Days, 2015**  
**Source: Greater Hampton Roads Connects**

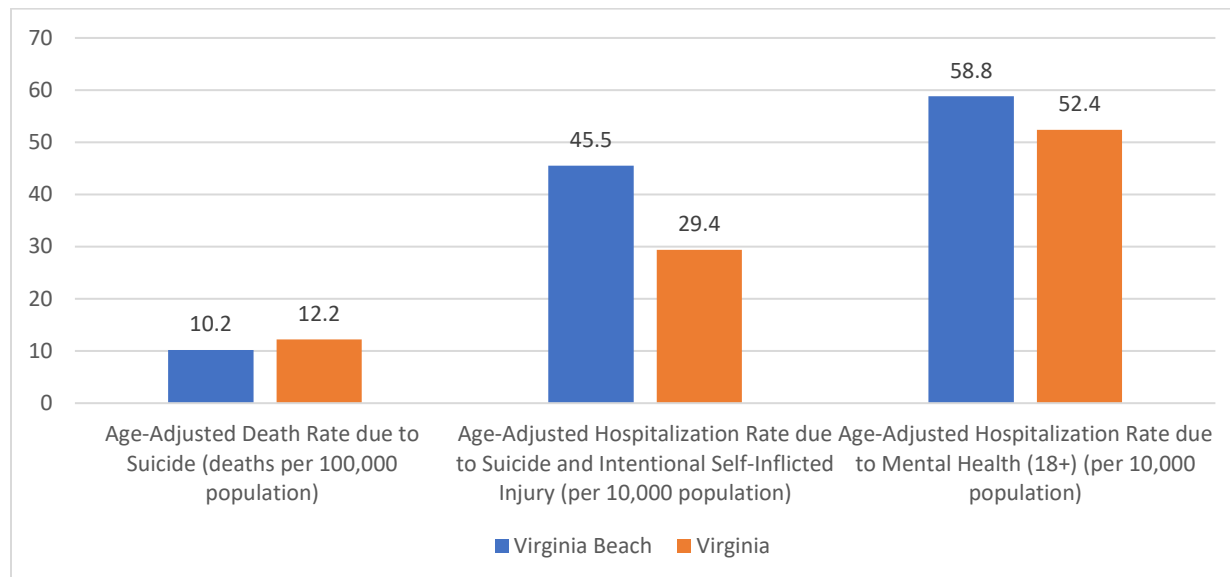
Virginia Beach residents reported higher diagnosis rates of depression and anxiety than the rest of the Hampton Roads region, 16.5% versus 11.20% and 13.6% versus 11.90% respectively.



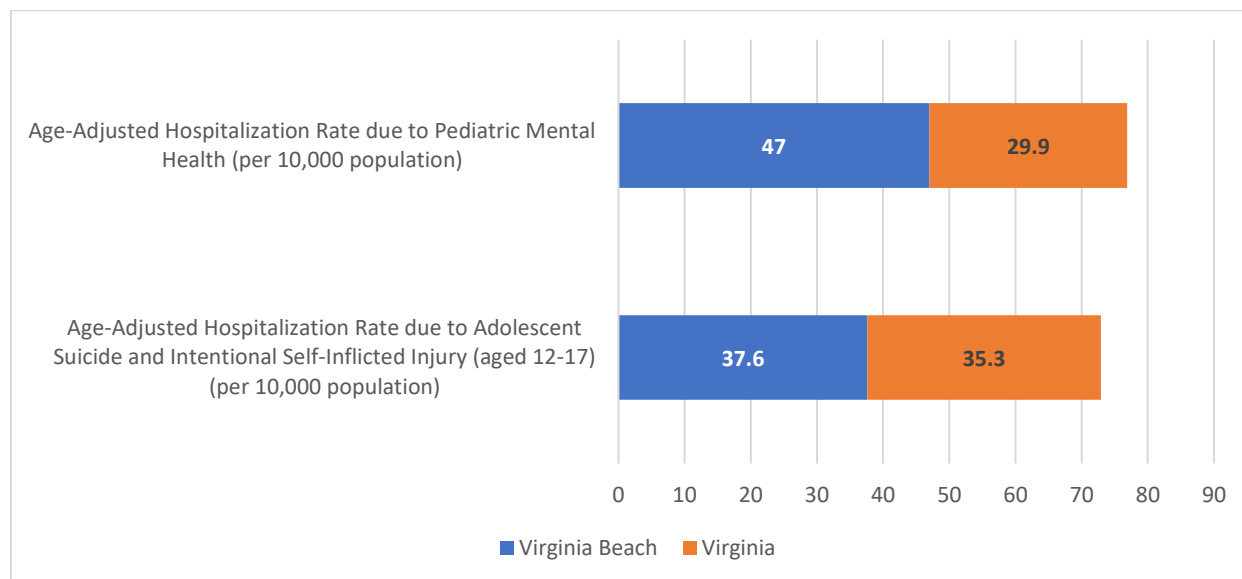
**Figure 79 Survey Results: “Has a doctor within the past 12 months told you that you have any of these behavioral health conditions?” 2018**  
**Source: ODU Life in Hampton Roads Survey**

As shown in Figures 80 and 81, 46.46 successful suicides out of 2,072.67 hospitalizations for suicide and intentional self-inflicted injuries among the entire Virginia Beach population. The younger population is sadly not exempt. Almost 500 youths out of the 102,431 persons under the age of 18 in Virginia Beach

experienced a mental health related hospitalization and some 10,500 Virginia Beach teens reported feeling sad or hopeless.



**Figure 80 Select Hospitalization and Death Rates Related to Suicide and Intentional Self-Inflicted Injury, 2013-2015**  
Source: Greater Hampton Roads Connects

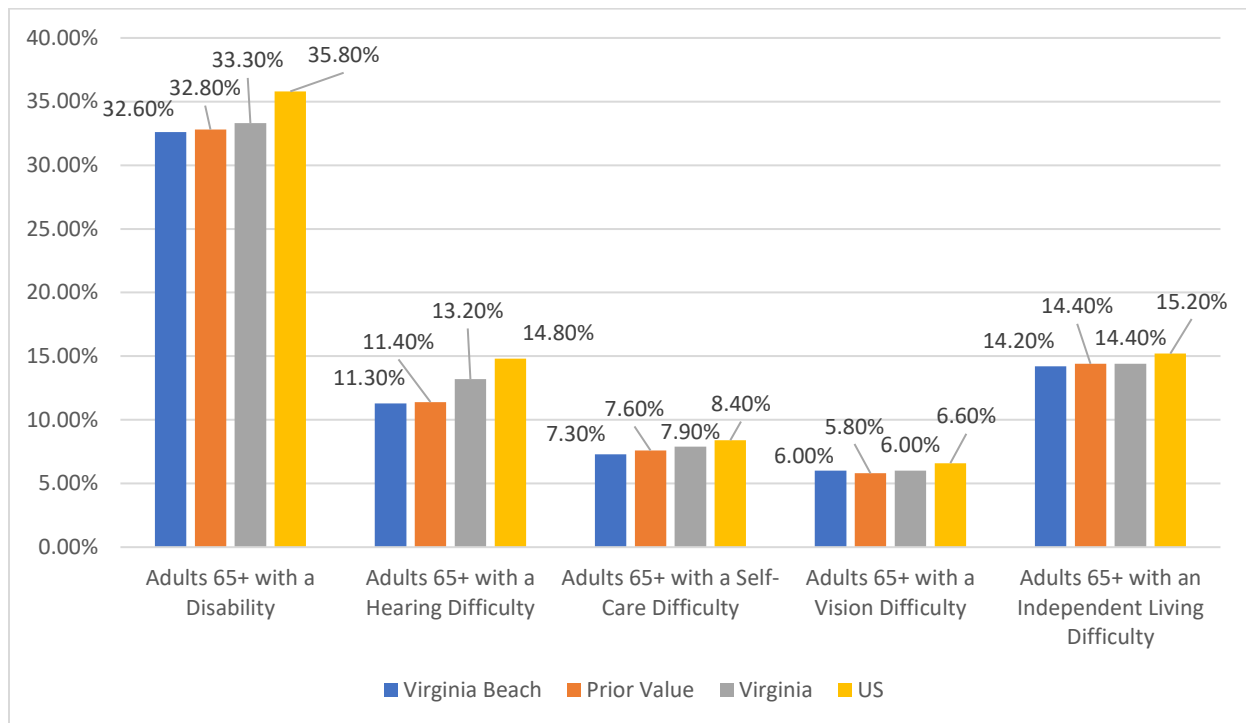


**Figure 81 Pediatric and Adolescent Hospitalization Rates due to Mental Health and Suicide/Intentional Self-Inflicted Injury, 2014-2016**  
Source: Greater Hampton Roads Connects

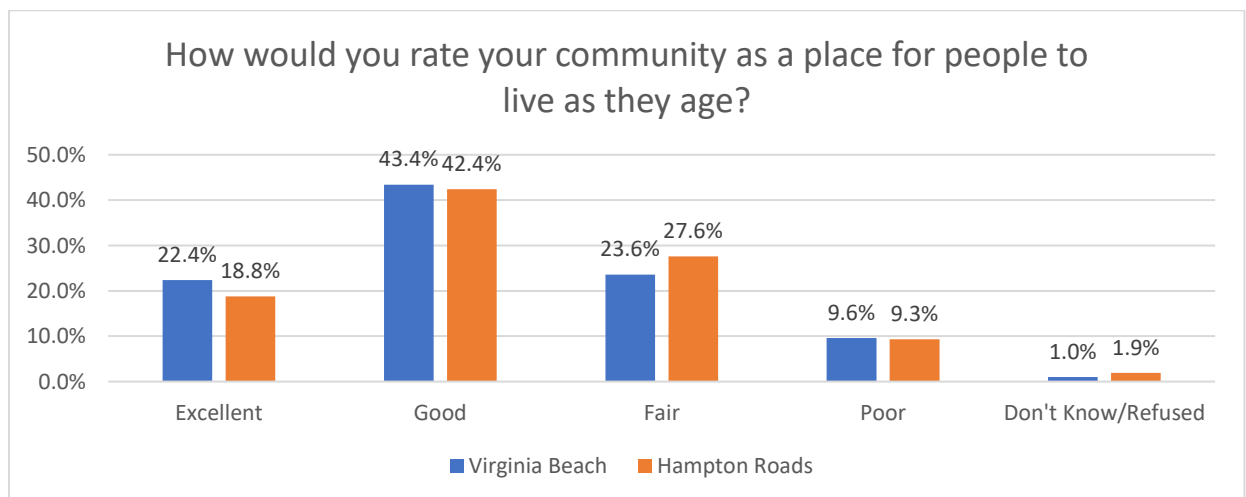
## Aging and Older Adults

With a growing aged population, come unique conditions and considerations. The following data will provide an overview of the state of the aging and older adult population in Virginia Beach. Older adults in Virginia Beach generally had lower rates of disability or other difficulty than Virginia and US averages.

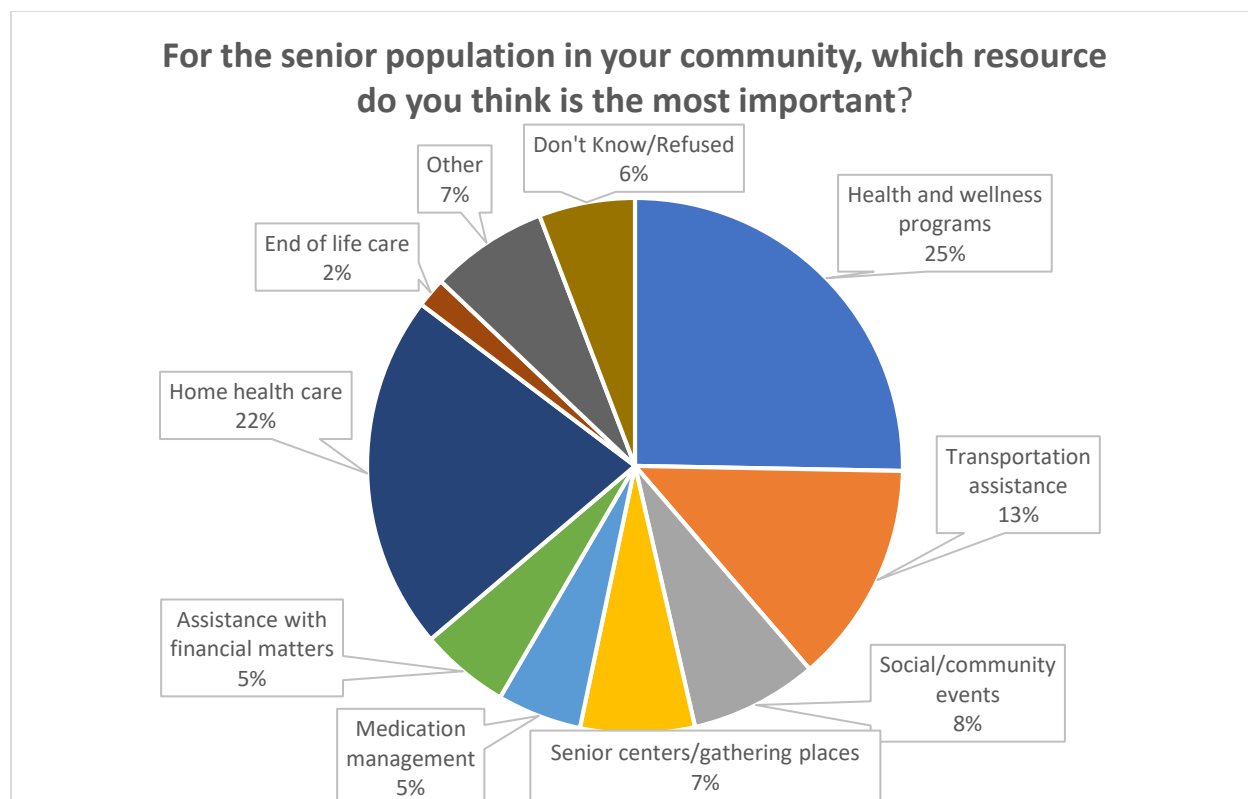
As shown in Figure 83, most Virginia Beach residents think the city is an “Excellent” or “Good” place to live (22.4%, 43.4%).



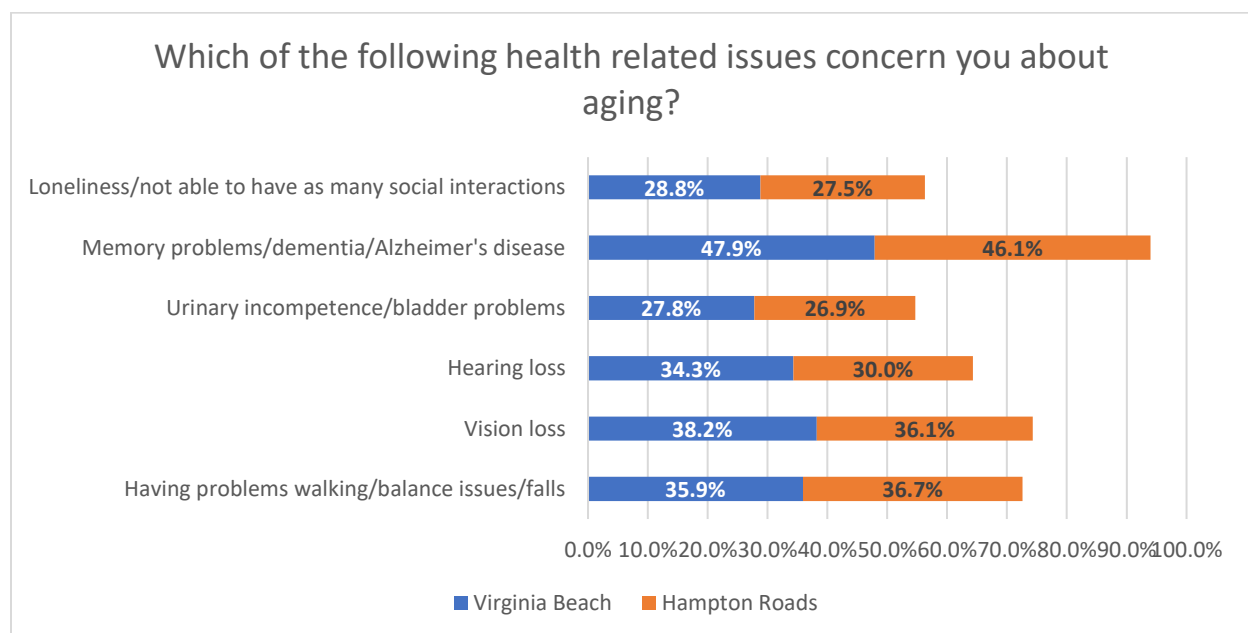
**Figure 82 Comparison of Older Adult Persons with Disability or Other Difficulty, 2012-2016**  
Source: Greater Hampton Roads Connects



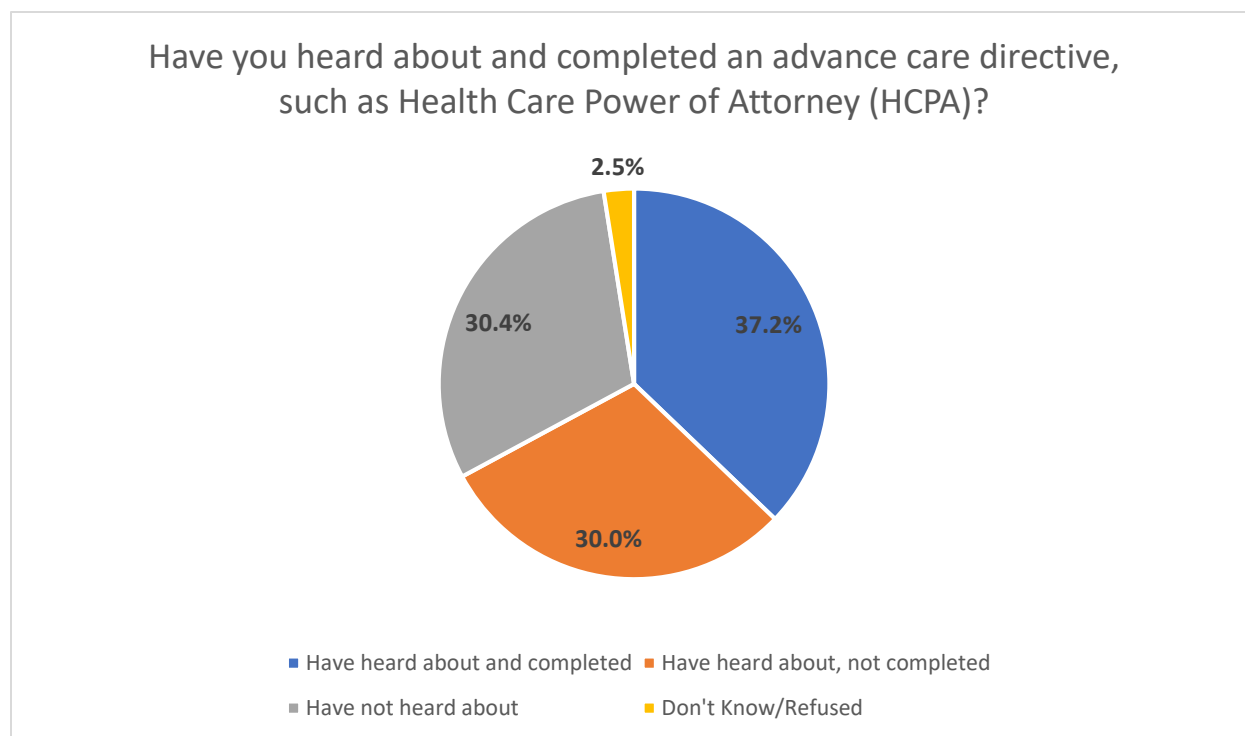
**Figure 83 Survey Results: “How would you rate your community as a place for people to live as they age?” 2018**  
Source: ODU Life in Hampton Roads



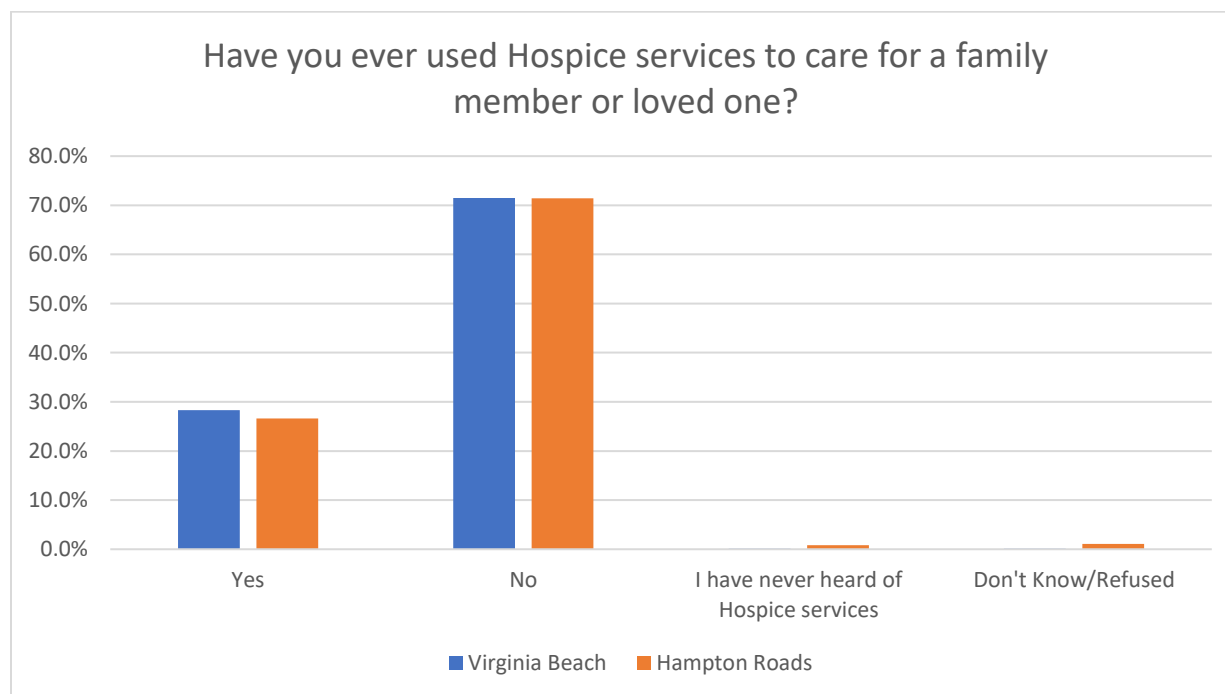
**Figure 84 Survey Results: "For the senior population in your community, which resource do you think is the most important?" 2018**  
Source: ODU Life in Hampton Roads



**Figure 85 Survey Results: "Which of the following health related issues concern you about aging?" 2018**  
Source: ODU Life in Hampton Roads



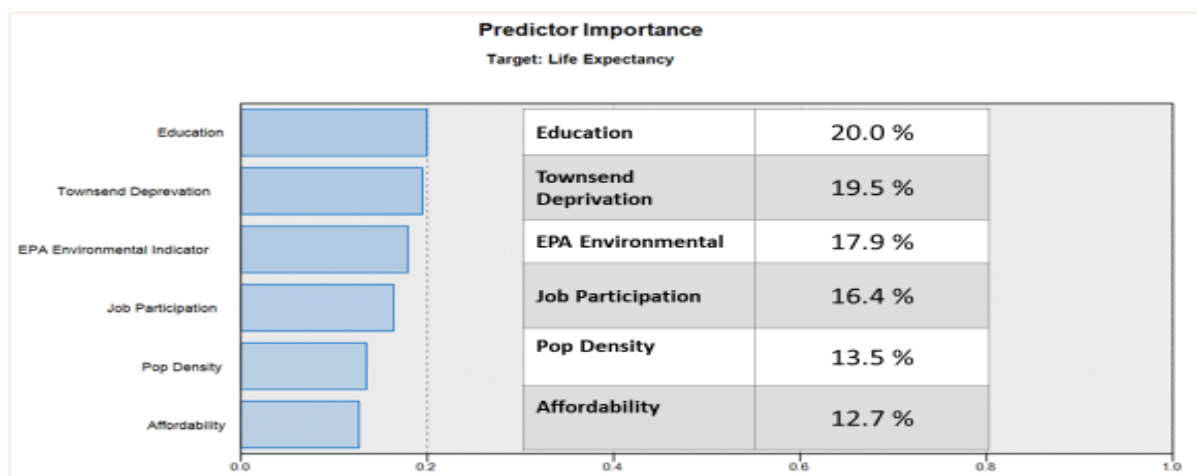
**Figure 86 Survey Results: “Have you heard about and completed an advance care directive, such as Health Care POA?” 2018**  
 Source: ODU Life in Hampton Roads



**Figure 87 Survey Results: “Have you ever used Hospice services to care for a family member or loved one?” 2018**  
 Source: ODU Life in Hampton Roads

## Life Expectancy

Life expectancy is a useful indicator for determining the overall health and well-being of a community. The social determinants of health ultimately have high impact on the overall life expectancy. The figure below represents key predictors used to determine the life expectancy of a population. Education, job participation, population density, and affordability are key as are the Townsend Deprivation Index and the EPA Environmental Factor. The Townsend Deprivation Index is a composite index that examines the availability of private material resources to households in a given community. The index is made up of four indicators: overcrowding (> 2 persons per room), unemployment, % of persons with no vehicle or car, and % of persons who rent. EPA Environmental Indicators include a range of environmental health indicators that give help demonstrate the overall environmental health of the city and built environment.



**Figure 88 Life expectancy predictors, 2018**  
Source: Virginia Beach Department of Public Health

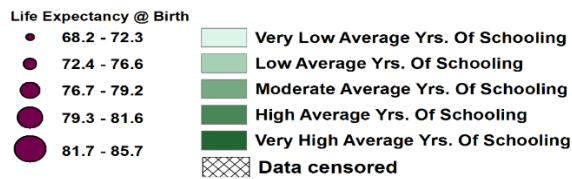
Figures 89 and 90 below depict the correlation between education and life expectancy and then the correlation between the Townsend Deprivation Index and infant mortality, respectively. As the figures demonstrate, and as is consistent with general understanding of the relationship of social determinants to health to health outcomes, including life expectancy and infant mortality, neighborhoods that have greater levels of education and better access to basic material necessities are more likely to live longer and have lower rates of infant mortality.

# Virginia

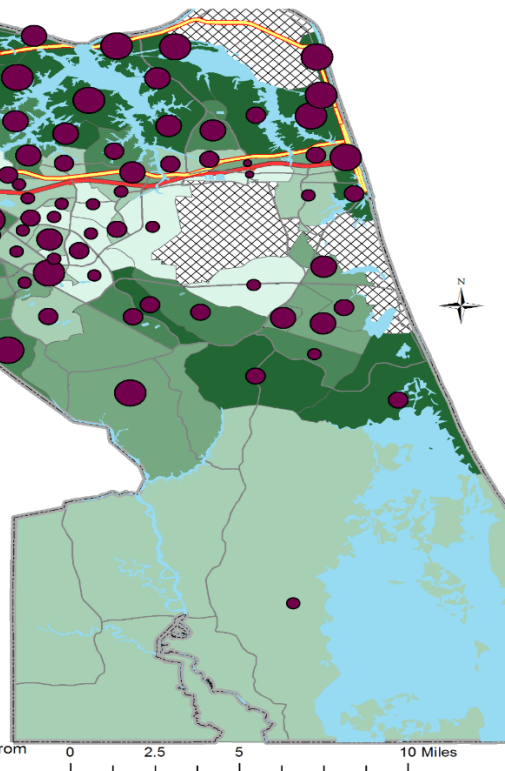
## Virginia Beach Health District

### Education Index \*

by Census Tract  
Overlaid with Life Expectancy at Birth



\* The average number of years of schooling among adults in the community. It can range from zero (those with no formal schooling) to 20 (those with a doctorate/professional degree).

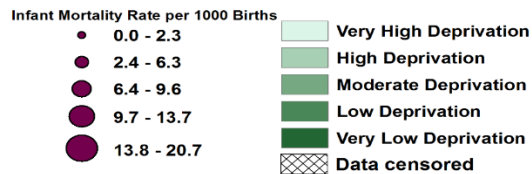


# Virginia

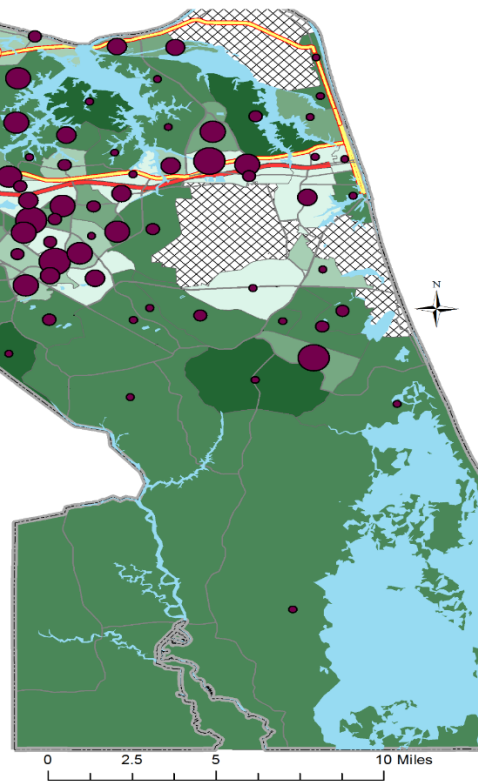
## Virginia Beach Health District

### Townsend Material Deprivation Index \*

by Census Tract  
Overlaid with Infant Mortality Rate



\*It examines the private material resources available to households in a community. 4 indicators make up Townsend namely overcrowding (>2 persons per room), Unemployment, % of persons no vehicle or car, % of person who rent



Figures 89 & 90 Virginia Beach Health District, Education Index and Life Expectancy; Townsend Deprivation Index and Infant Mortality, 2018  
Source: Virginia Beach Department of Public Health



## Focus Groups Results

Focus groups play an important part in humanizing the many different data points included in this Community Health Assessment (CHA). The qualitative data gathered during a focus group provides the color and nuance that quantitative data often lacks – quantitative might provide the what, when, where, and how, but qualitative data from focus groups can help shape the why.

Through collaboration with local hospital partners, various focus groups were completed throughout the Virginia Beach community during March and April 2019. Participants in the various focus groups ranged from 4 to 15. Participants ranged in age, race, and gender representation, providing a heterogeneous representation of the Virginia Beach community.

The focus groups included:

- Virginia Beach Department of Public Health Women, Infants and Children (WIC) Program
- Virginia Beach Housing Resource Center
- Sentara Virginia Beach General Patient Family Advisory Council
- Sentara Virginia Beach General Medical Executive Committee
- Sentara Princess Anne Auxiliary
- Sentara Princess Anne Grand Clergy Rounds
- Green Run Home Owners Group
- Virginia Beach Emergency Medical Services (EMS)

Five key questions were asked of focus group participants to help identify the most serious health problems facing the community, as well as what populations are perceived as most vulnerable and what resources are well known in the community and what additional supports are required. Following completion of the focus groups, responses were transcribed. These transcribed notes were then analyzed using NVivo.

NVivo is a specialized software program that allows for analysis of various sources of qualitative data, such as findings from focus groups. NVivo allows for systematic categorization of qualitative data, allowing users to methodically organize data and analyze for recurring themes, sentiments, and attributes. Through additional analysis tools within the software, NVivo users can then visualize the results, making the data more accessible and understandable.

Using NVivo, each of the different questions was analyzed and key themes were discovered. Using NVivo's "Word Cloud" functionality, the key themes are presented below in response to each of the respective questions, providing a reinforcing visualize to support the findings described in the text narrative.

The responses to this question were highly heterogeneous, with a wide array of health problems identified by participants, including specific chronic conditions, social determinants of health, and cost and access issues to health care services. The most common themes identified through NVivo analysis were: mental health and substance abuse, access to care, and cost of care (including those who are underinsured and uninsured). Healthy literacy and education were also identified as health related problems common in Virginia Beach.



Responses to this question showed that there was great consensus among focus groups regarding which individuals within the Virginia Beach population were most vulnerable to the problems identified, particularly the elderly, children, homeless individuals, low income persons and families, and veterans. Single persons living alone were singled out several times as among the most vulnerable due to lack of family and social support.



**What keeps people from being healthy? In other words, what are the barriers to achieving good health?**

As was the case with the first question posed to the group, responses identifying the barriers to achieving good health were many. However, the central theme underlying the majority of responses was the “lack” of something – lack of education, lack of financial resources, lack of community resources, lack of transportation, lack of providers, lack of insurance. Only a few responses indicated that personal choice, self-efficacy and motivation were barriers to achieving good health. Most responses support the importance of community connectivity and engagement.



**What is being done in our community to improve health and to reduce barriers? What resources exist in the community?**

Focus group participants identified various programs and resources in the community, including the local hospitals and the new Housing Resource Center. The Virginia Beach Recreation Centers and YMCAs were also commonly referenced as key programs for promoting health. Many participants indicated that they were not familiar with some of the resources mentioned by their peers.



Focus group participants identified that the community itself is perhaps the most important source for change. Education, events and connecting vulnerable populations to resources were commonly recommended. Many of the comments expressed by focus group participants underscored the importance of improving education and health literacy efforts supported by response of ability to connect to individuals and groups



Virginia Beach  
DEPARTMENT OF  
Public Health

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